PUBLIC HEALTH
Practice-Based Research Networks
National Coordinating Center

Public Health PBRN
Monthly Virtual Meeting
March 21, 2013

Research-in-Progress Presentation by

Nebraska PBRN

Examining the Relationship between Quality Improvement and Accreditation Strategies for Regional Local Health Departments in Nebraska

Li-Wu Chen, PhD, Anh Nguyen, MSPH, Janelle Jacobson, MPH, CHES, & Dave Palm, PhD.

If you are dialed into the conference line on the telephone 877-394-0659 code 7754838037#, please turn off your computer speakers.

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Examining the Relationship between Quality Improvement and Accreditation Strategies for Regional Local Health Departments in Nebraska

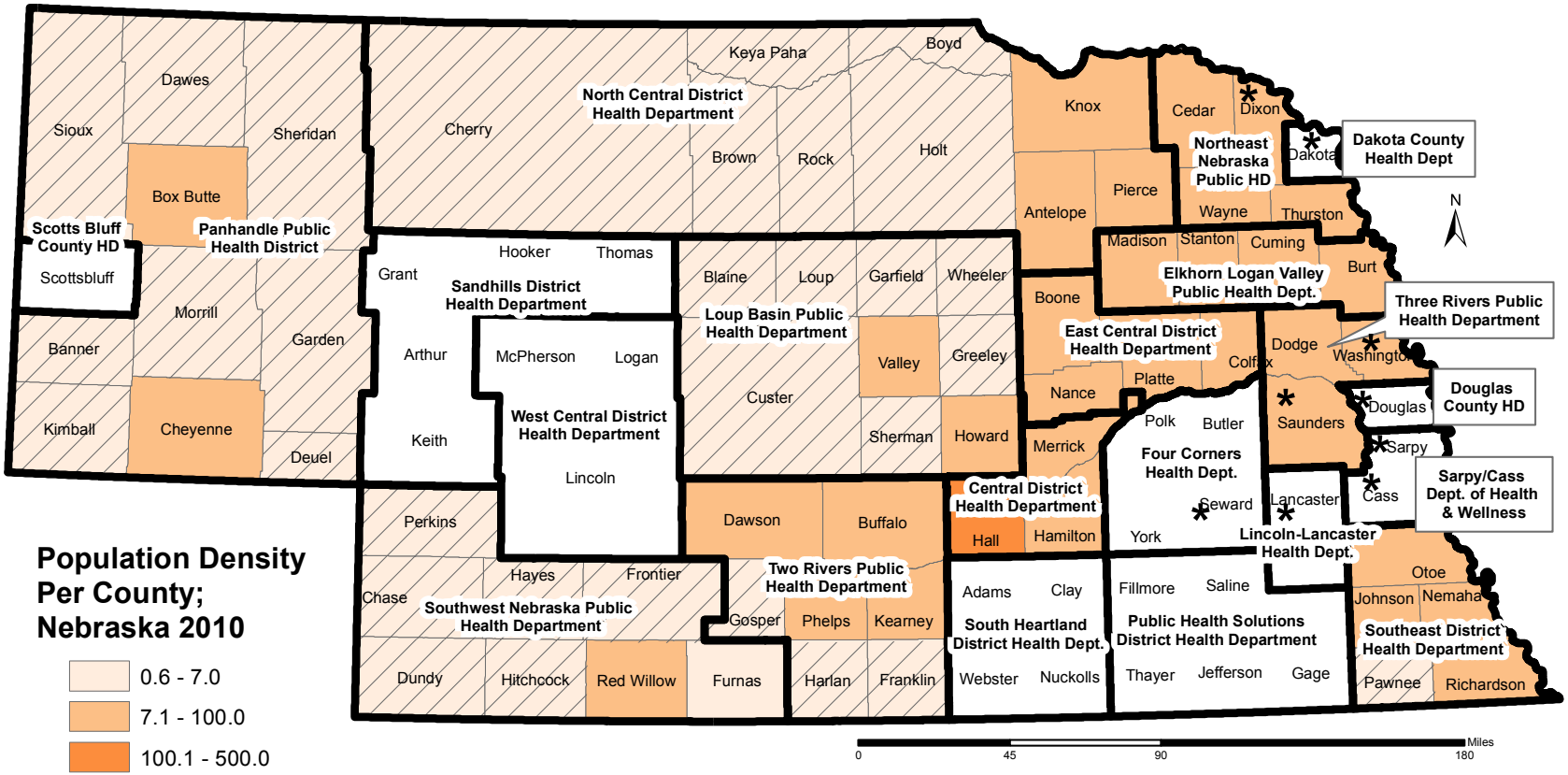
Department of Health Services Research & Administration, College of Public Health, University of Nebraska Medical Center

Office of Community and Rural Health, NE Department of Health and Human Services

Thursday, March 21, 2013

Acknowledgements:

- The funding for this project was provided by the Robert Wood Johnson Foundation (RWJF).
- Nebraska local health departments (LHDs), Nebraska Public Health PBRN, and Dr. William Riley
  - Project team: Li-Wu Chen, PhD (Co-PI), David Palm, PhD (Co-PI), Anh Nguyen, MSPH, Janelle Jacobson, MPH, CHES



Population Density Per County; Nebraska 2010

- 0.6 - 7.0
- 7.1 - 100.0
- 100.1 - 500.0
- 500.1 - 1521.8

Type of County

- * Urban County
- Frontier County
- Nebraska Public Health Districts

Sources of data: Nebraska Health Districts defined by Nebraska Health and Human Services System, 2010. U.S. Census Bureau, Population Per Square Mile 2010 Census. Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001. Federal Office of Management and Budget designation of Metropolitan and Micropolitan, 2003. U.S. Census Bureau, frontier definition, 2001.

Produced by: University of Nebraska Medical Center, College of Public Health Department of Health Services Research and Administration, 2011.
Cartography: Nicole Vanosdel, Medical Geographer, 2011.

Scope of Work

❖Quantitative Component –

Conduct a correlation analysis between the quality improvement (QI) measures and accreditation attributes for Nebraska LHDs, using survey data.

❖Qualitative Component --

Conduct site visit interviews on selected Nebraska LHD sites to collect more in-depth qualitative information on LHDs' strategies and planning for QI, accreditation and general performance management.

Current QI Activities and Accreditation Attributes in Nebraska's Local Health Departments: *Results from 2011 LHD Quality Improvement Survey*

Objective

- To assess the current status of Nebraska's LHDs in implementing public health quality improvement (QI) initiatives.
- To assess the accreditation attitudes, beliefs, and perceived readiness of Nebraska's LHDs.
- To examine the correlation between QI and accreditation attributes for NE LHDs.

Data Sources

- LHD Quality Improvement Survey, 2011 (Chen et al., 2011)
  - QI Taxonomy: Dr. William Riley
    - University of Minnesota
  - Multi-State Learning Collaborative: 2011 Annual Survey
    - Muskie School of Public Service, University of Southern Maine
  - Consulted the Nebraska Public Health PBRN

LHD Quality Improvement Survey

- QI Maturity Domains & Dimensions (Joly et al., 2012)
  - Organizational Culture: Values and norms that pervade how the agency interacts with its staff and stakeholders.
    - Commitment & Collaboration
  - Capacity and Competency: Skills, functions, and approach used within an organization to assess and improve quality.
    - Skills, Methods, & Investment
  - QI Practice: Ever implemented QI, Number of Projects, Length of Time Engaged in QI, Use of QI Strategy
  - Alignment and Spread: Extent to which QI supports and is supported by the organization as well as the diffusion of QI within the agency.
    - Integration, Authority, Value, & Implementation
- Accreditation attitudes, beliefs, and readiness

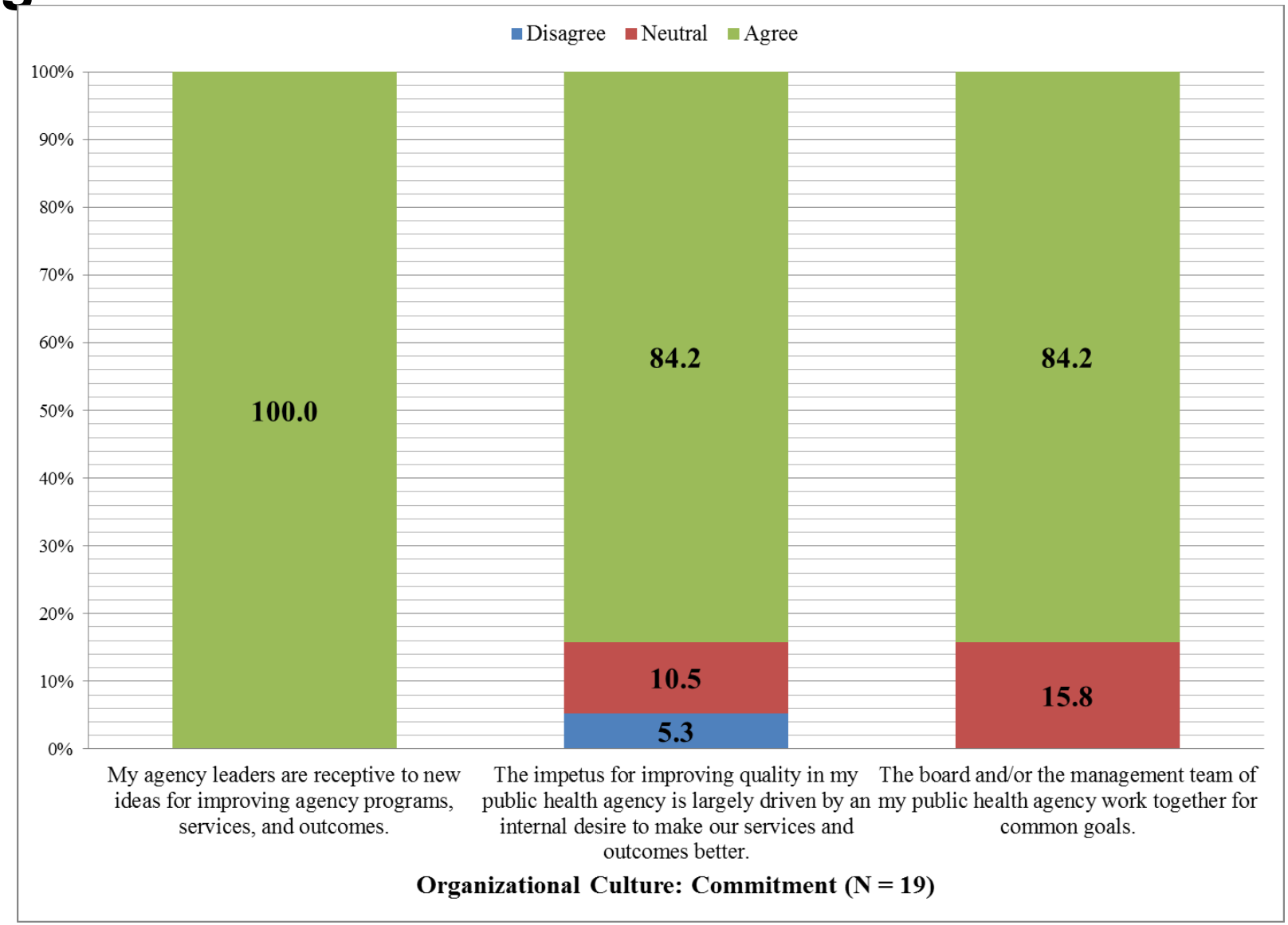
LHD Quality Improvement Survey

- Study Population
  - Sample
    - Surveyed all 21 LHD directors
  - Response
    - Total of 19 responses (90.5% of total sample)
      - Regional: n = 17
      - Single-County: n = 2

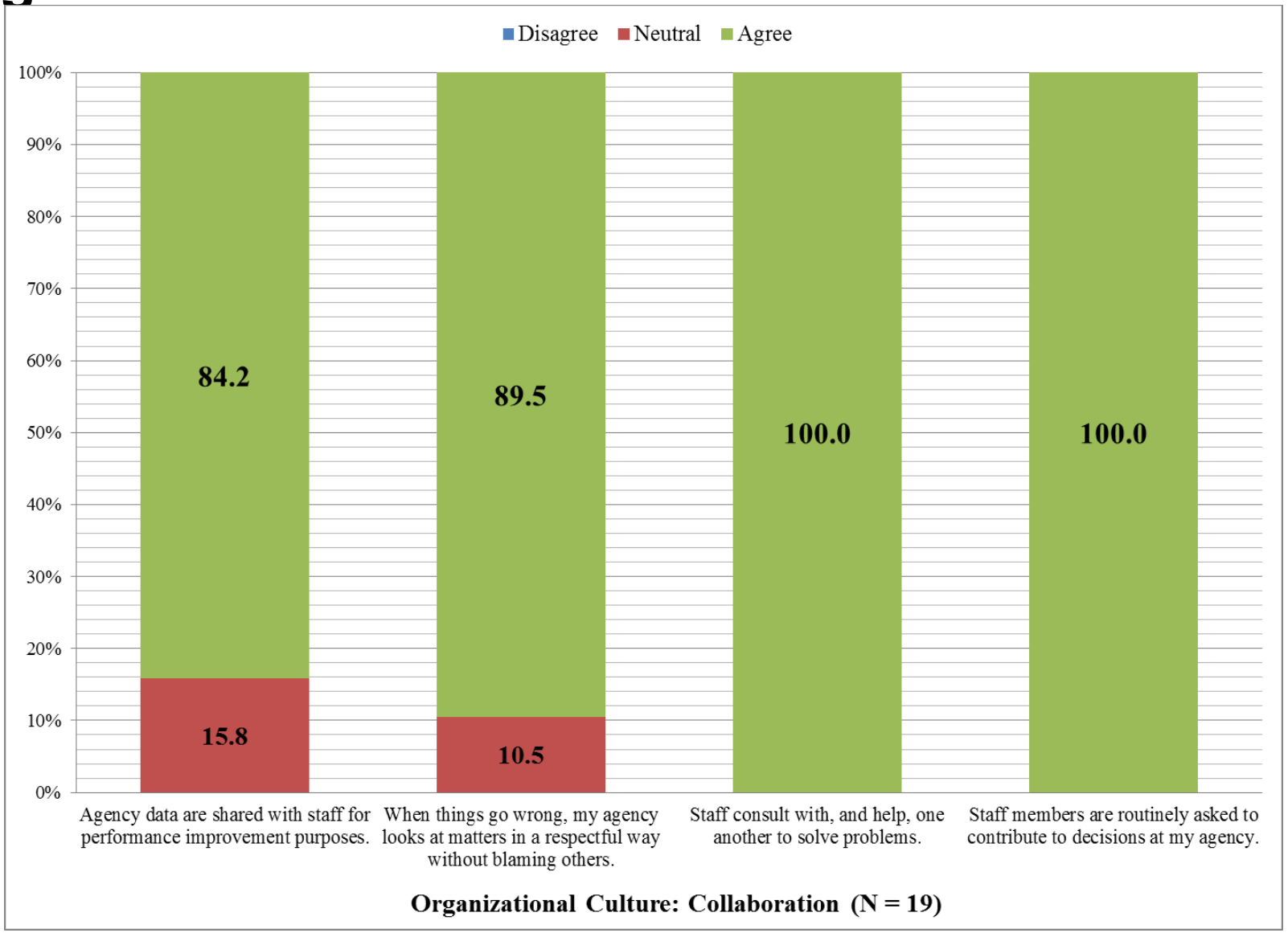
Analysis

- Descriptive Statistics (Frequencies, Percentages, Means, Medians, Min, and Max)
  - QI Maturity Measures: Items, Domains (Sum of Items), & Dimensions (Sum of Items)
  - Accreditation Measures: Attitudes, Beliefs, and Readiness items
- Spearman Correlation Analysis
  - QI Maturity x Accreditation

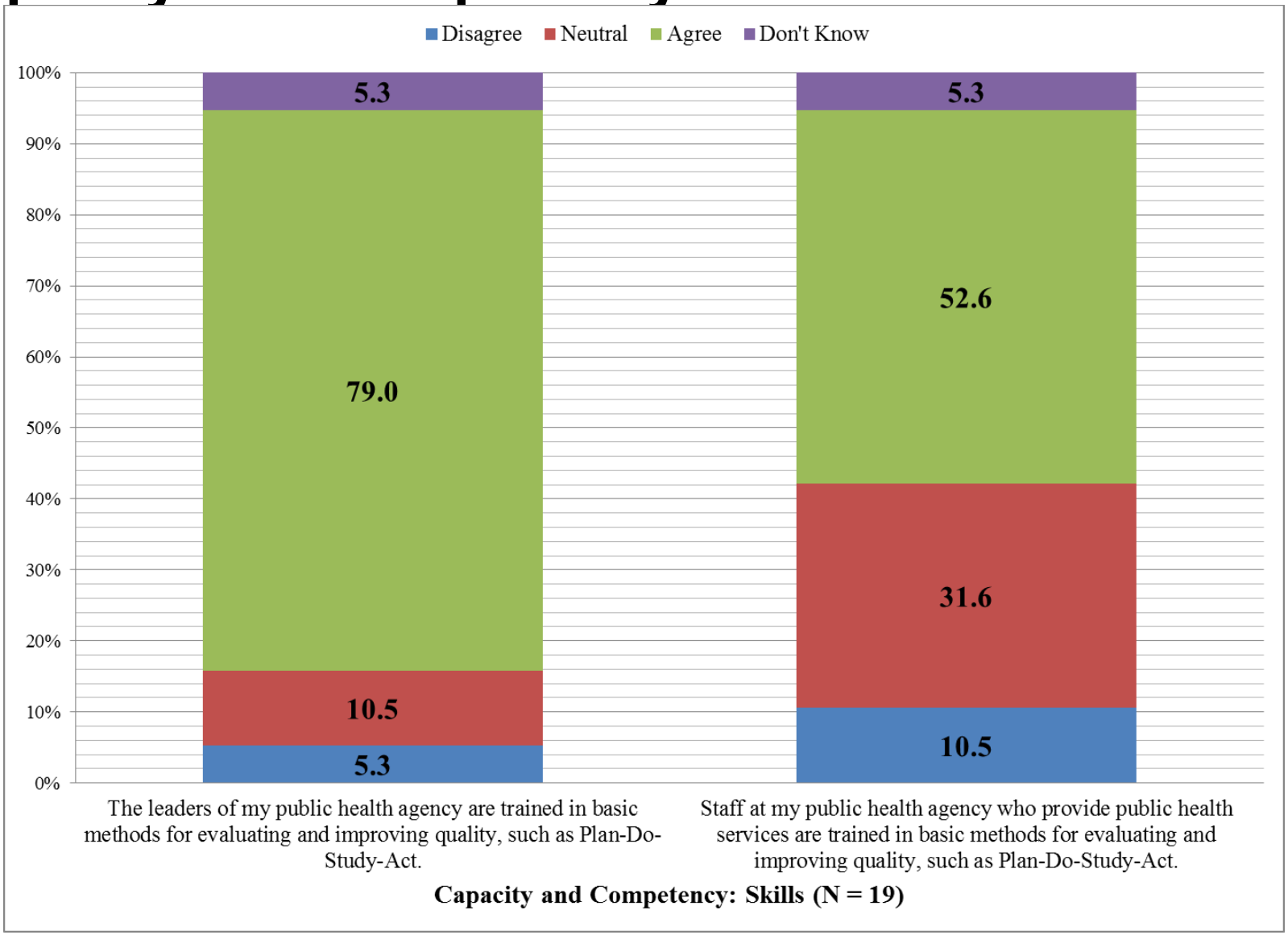
Organizational Culture: Commitment



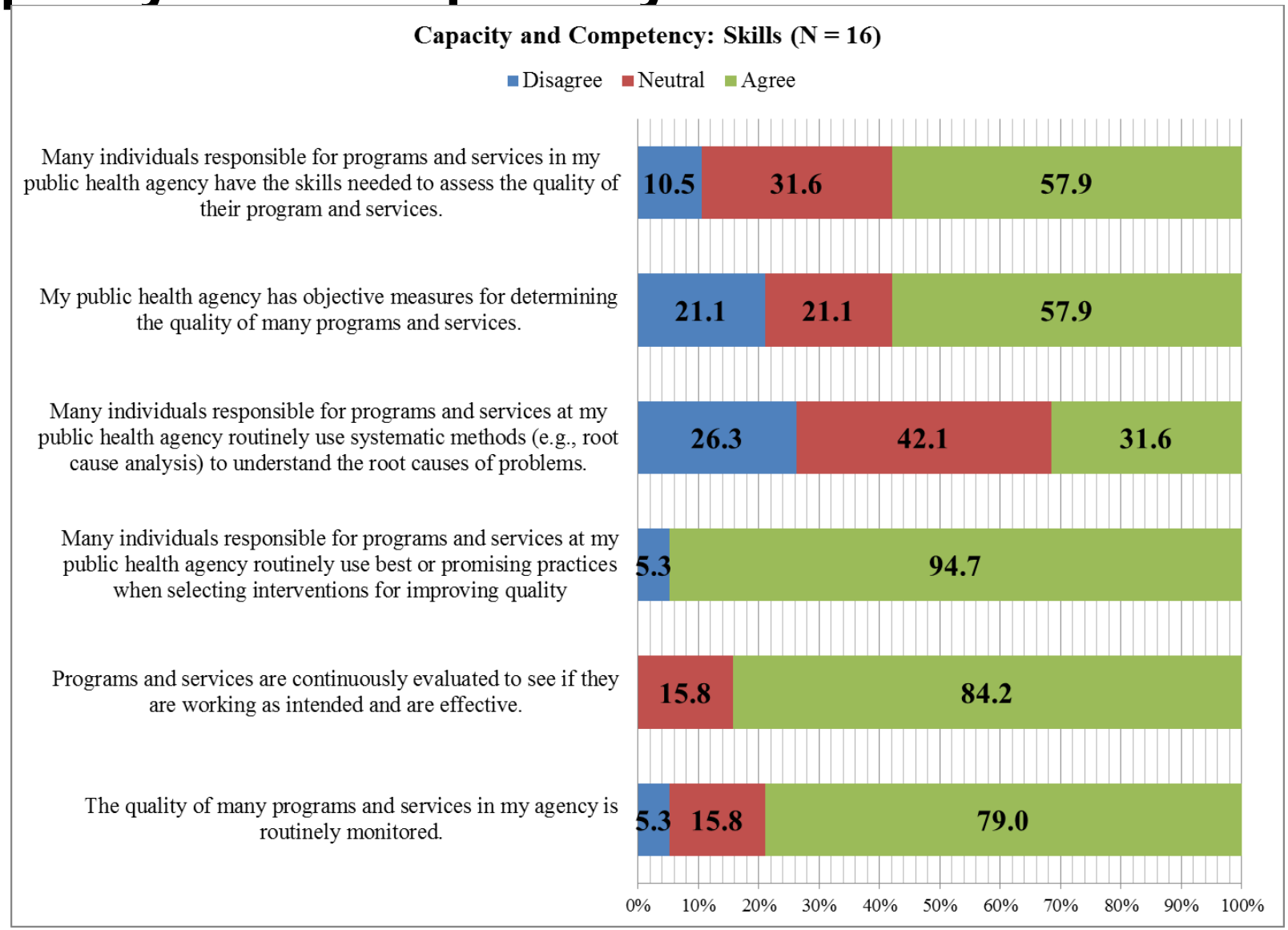
Organizational Culture: Collaboration



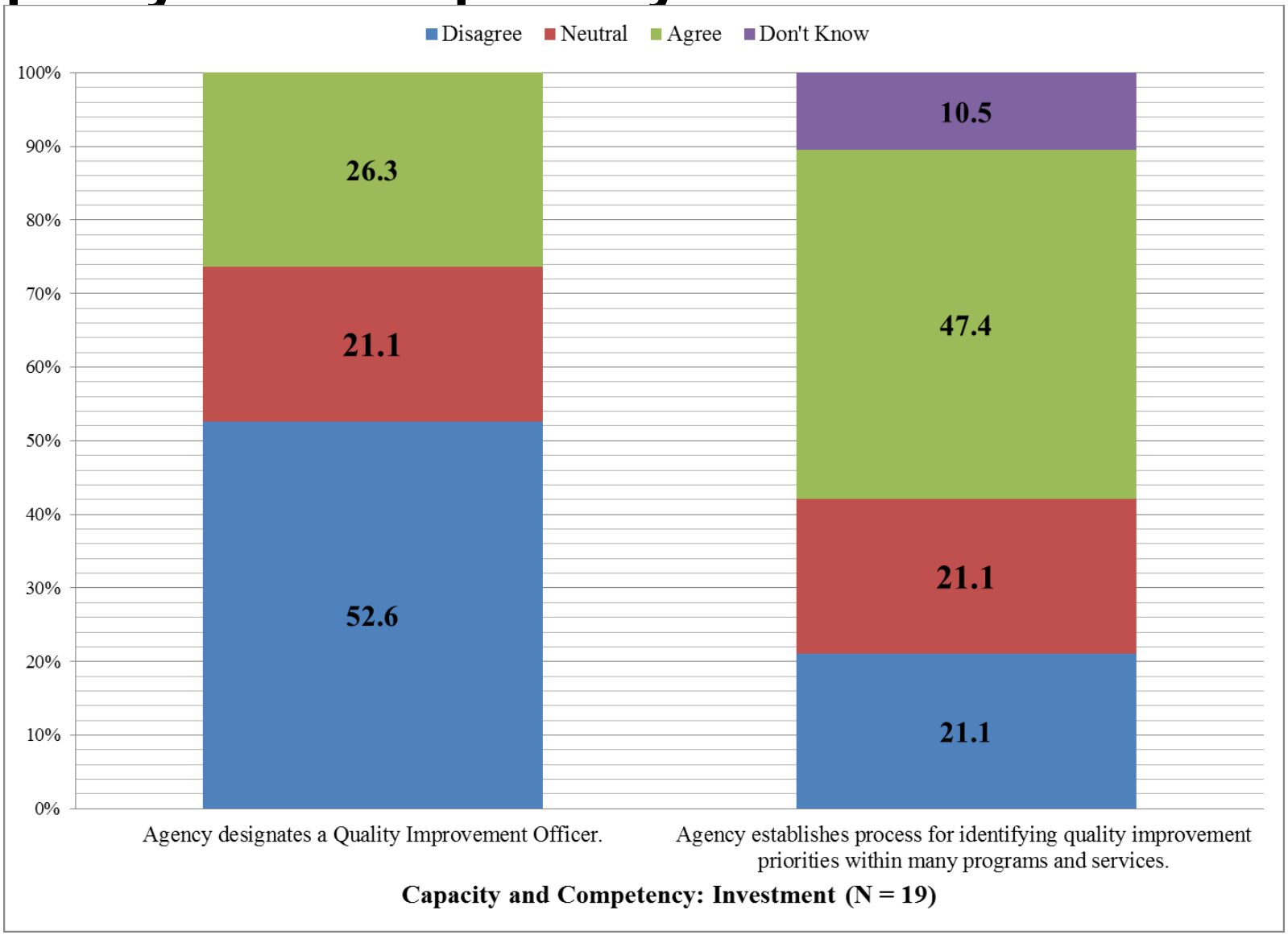
Capacity and Competency: Skills



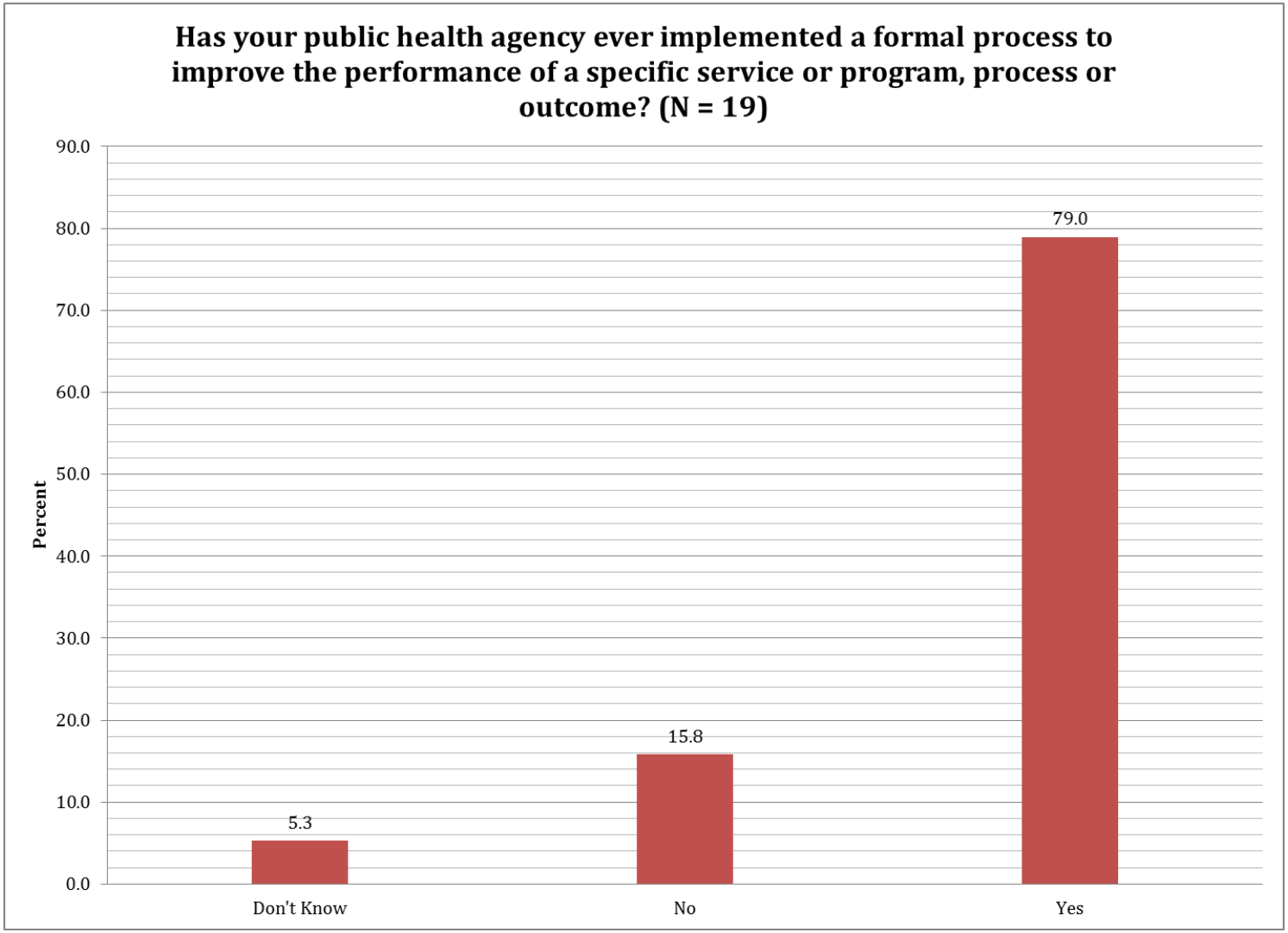
Capacity and Competency: Methods



Capacity and Competency: Investment

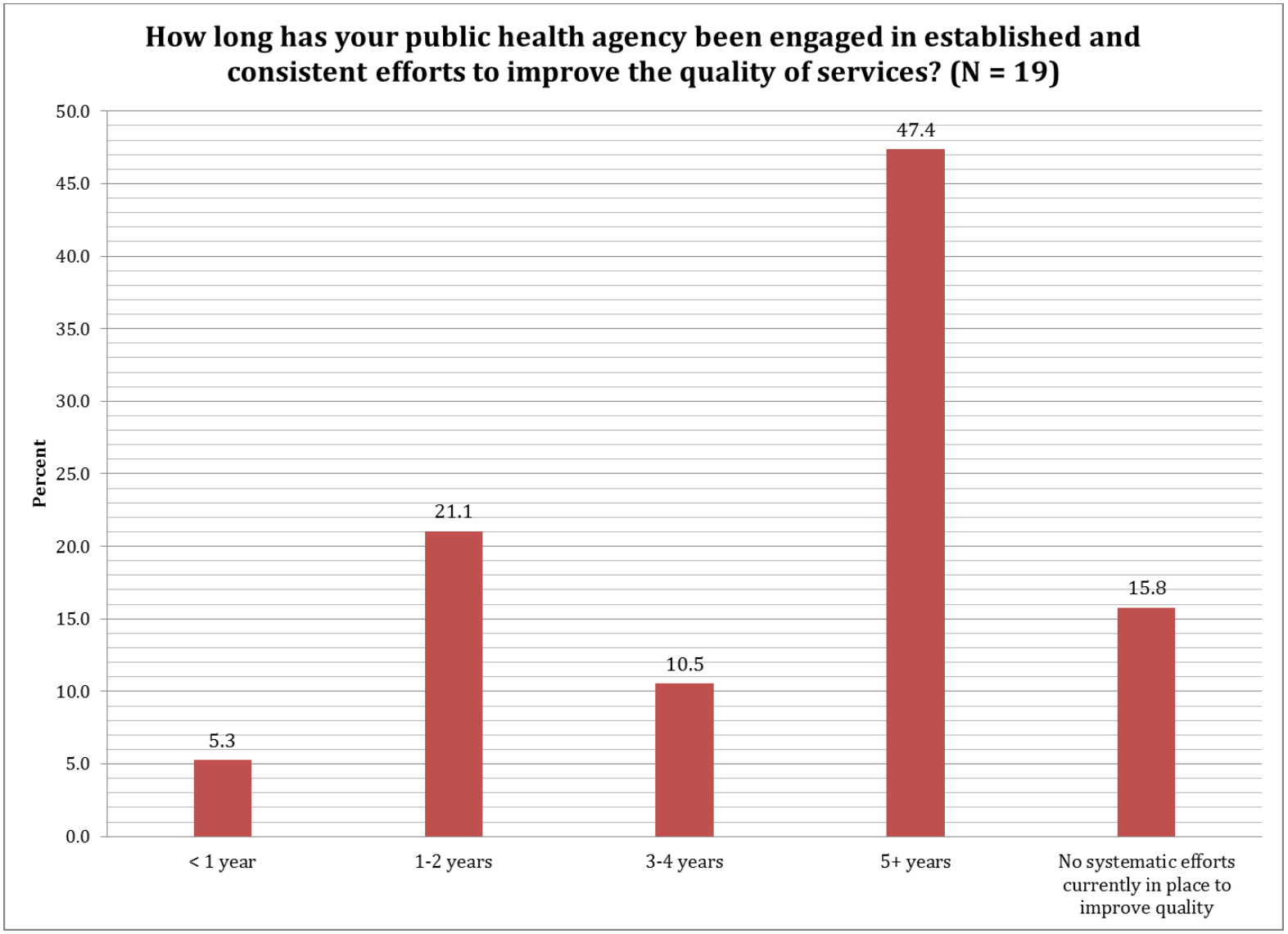


Quality Improvement Practice

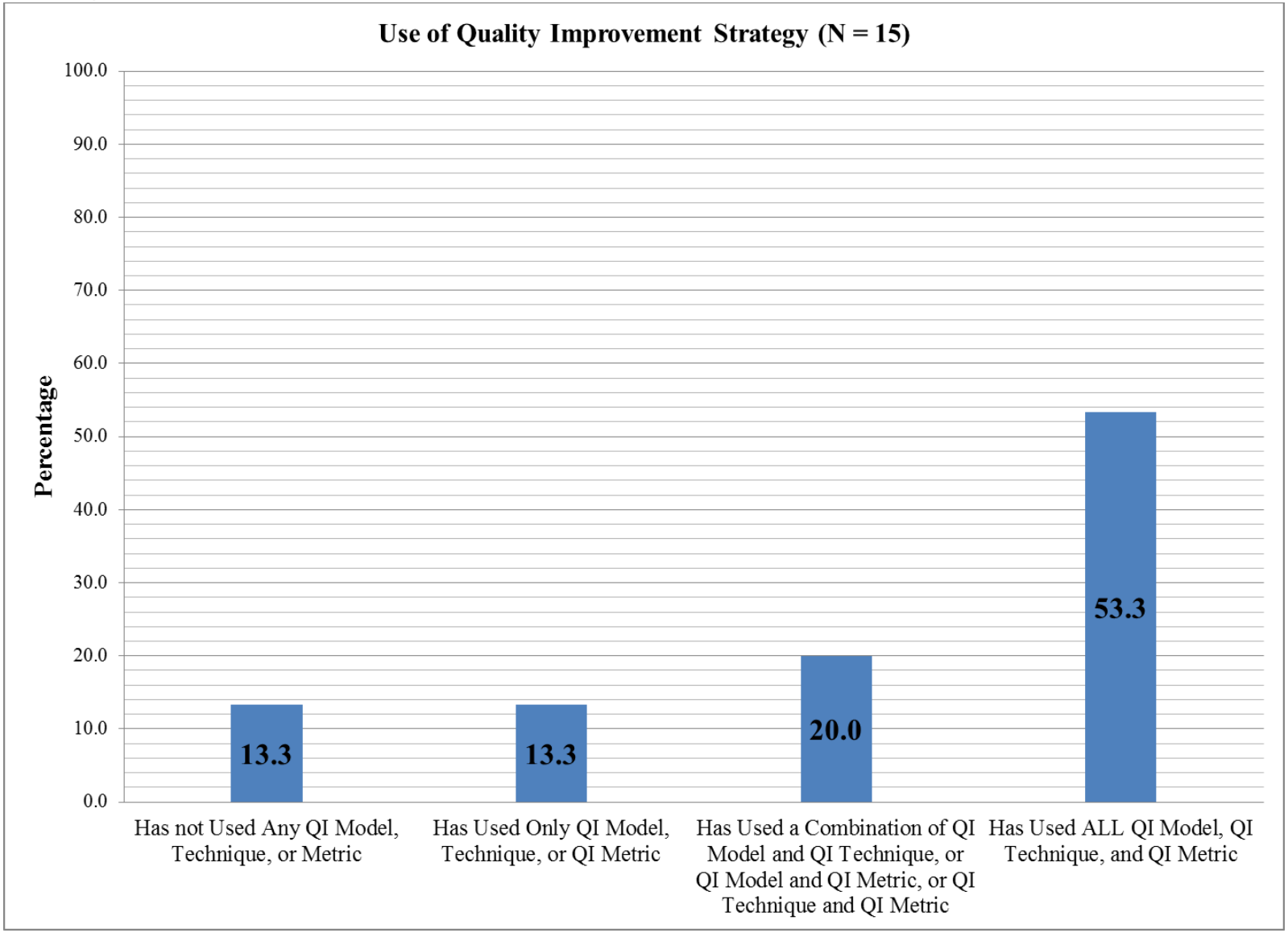


- In the past 12 months, a median of 3.0 (N = 8) formal projects has been implemented in LHDs.

Quality Improvement Practice

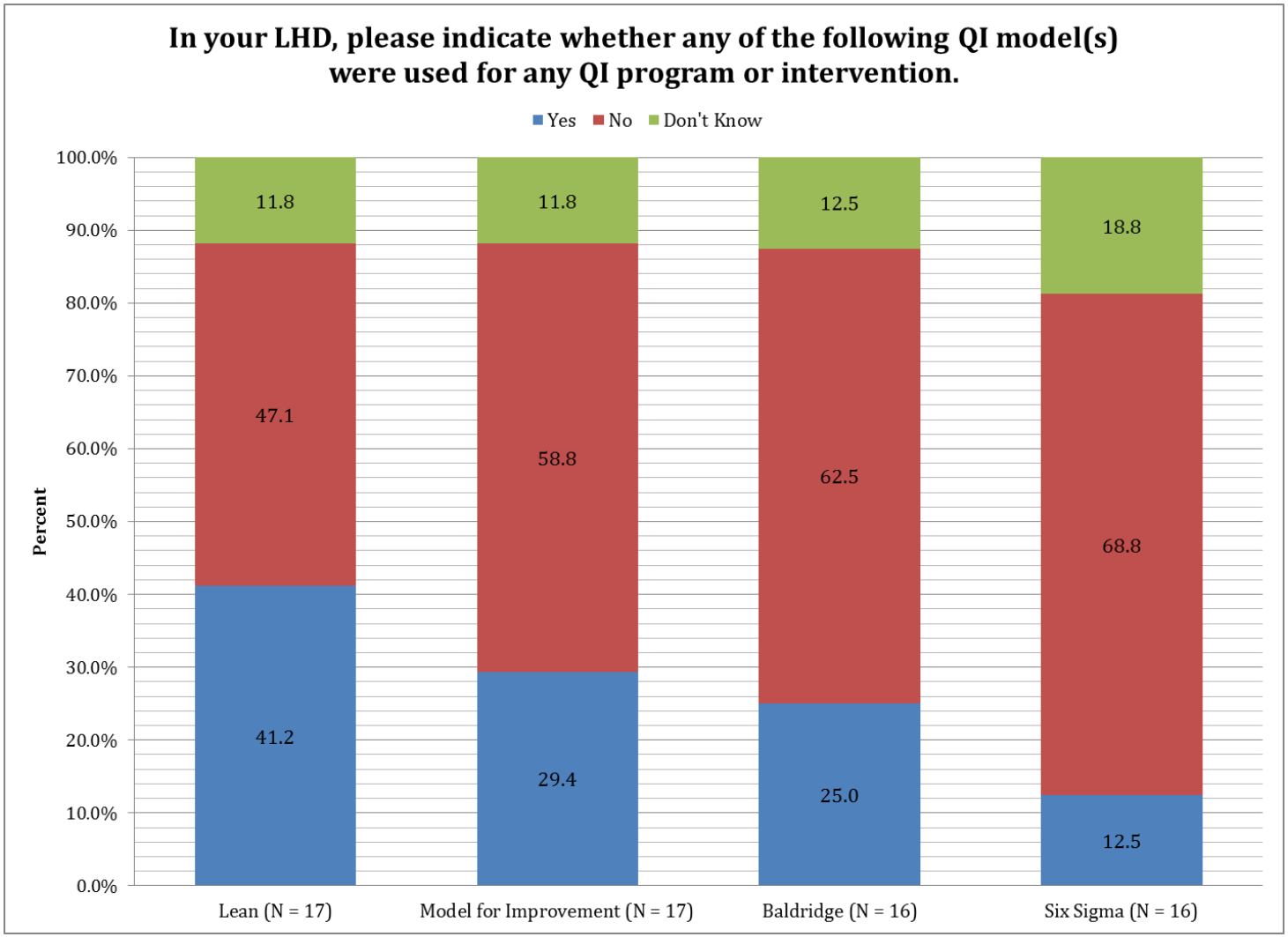


Quality Improvement Practice



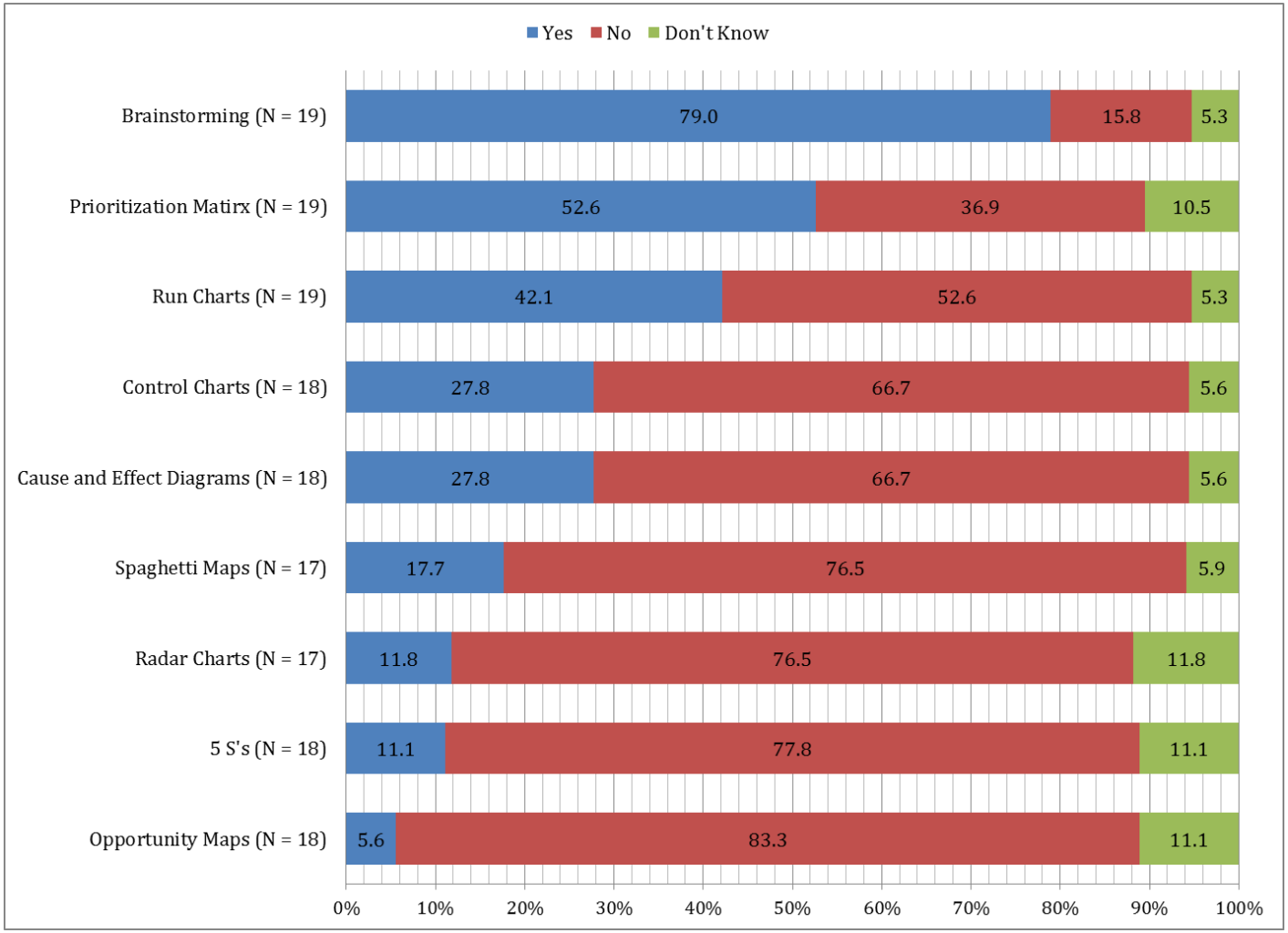
Quality Improvement Practice

- 47.4% (n = 9) of LHDs indicated that a QI model was used for any QI program or intervention.



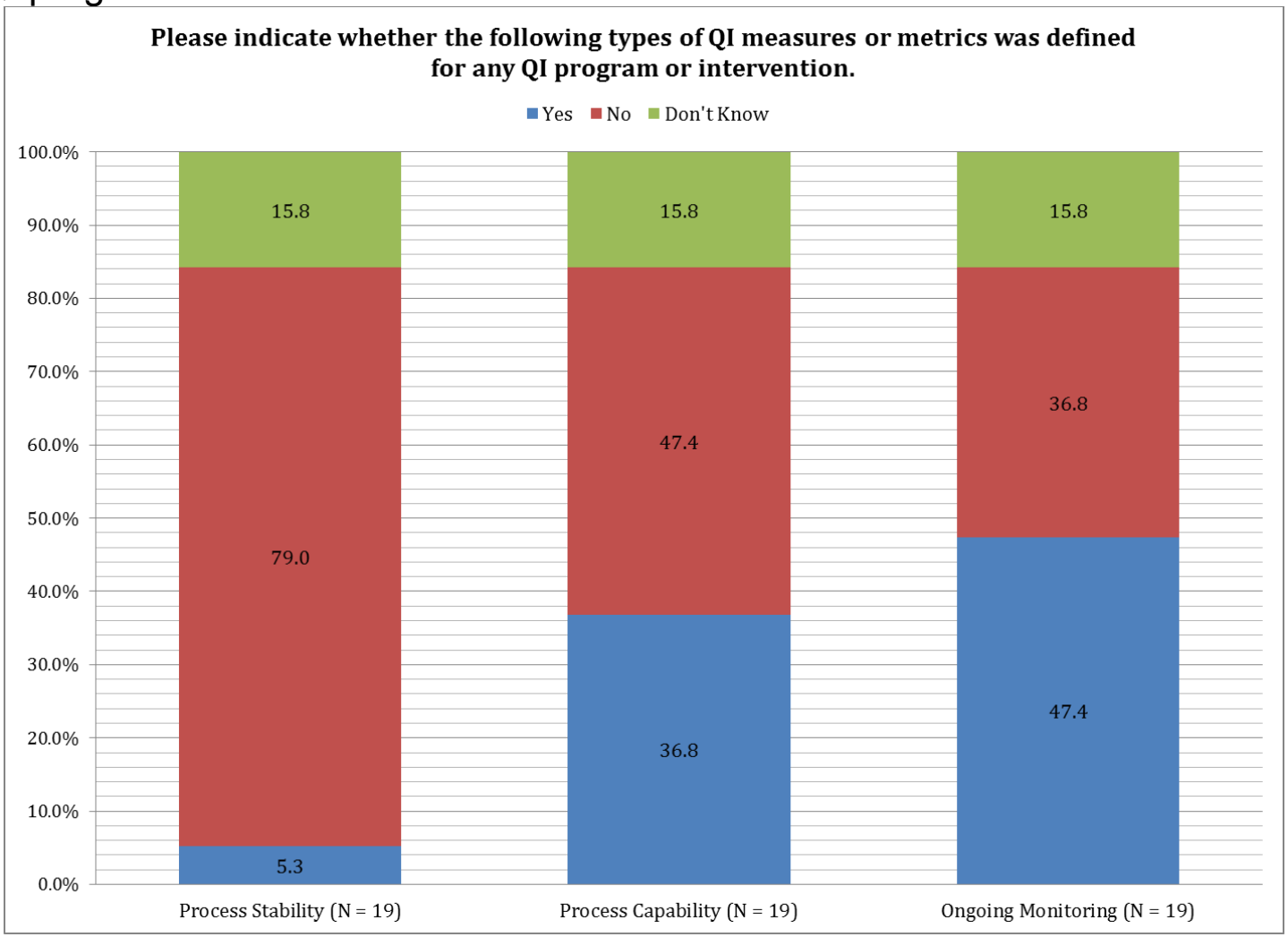
Quality Improvement Practice

- 47.1% (n = 8) of LHDs indicated that QI techniques were used for any QI program or intervention.

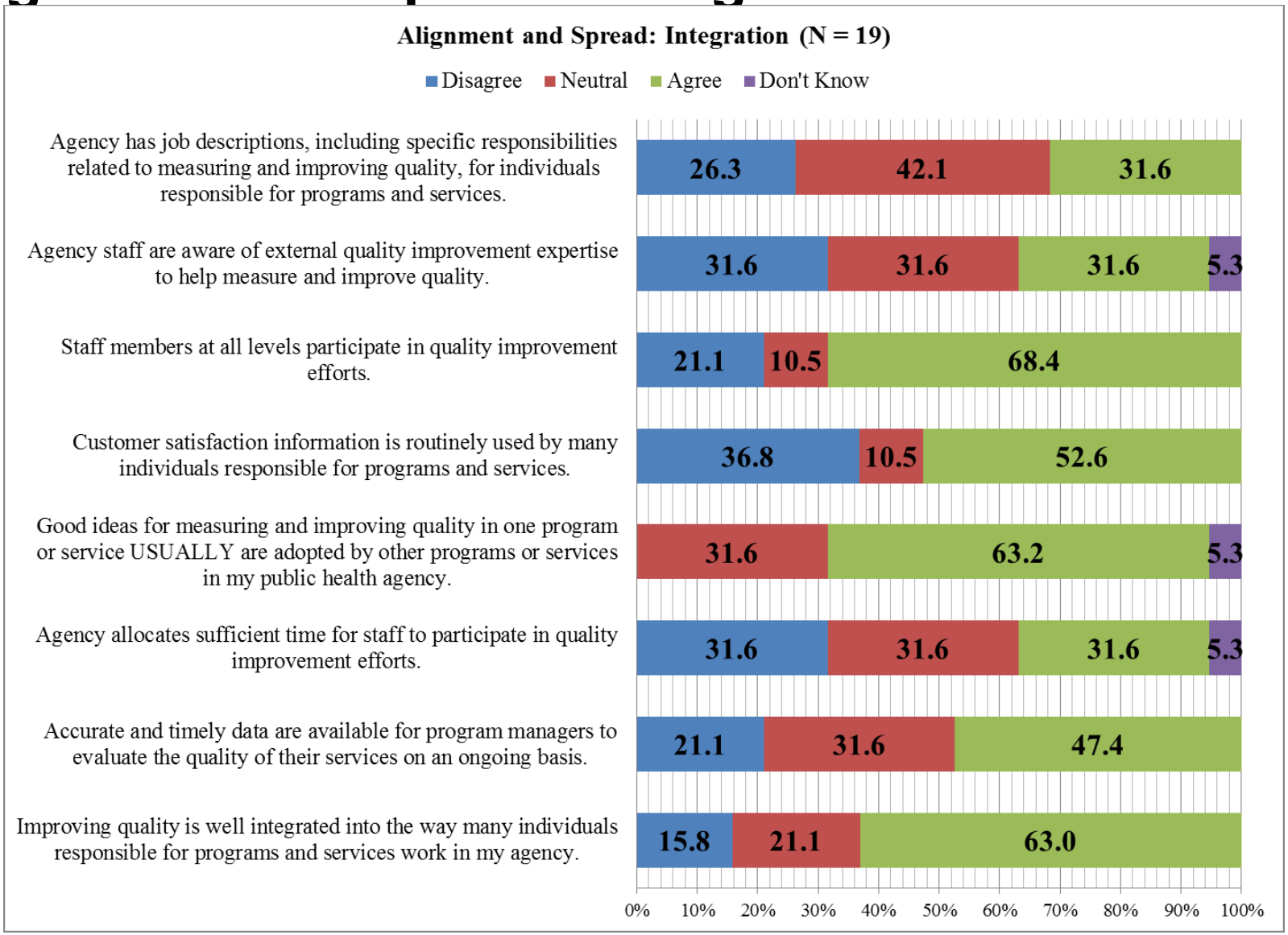


Quality Improvement Practice

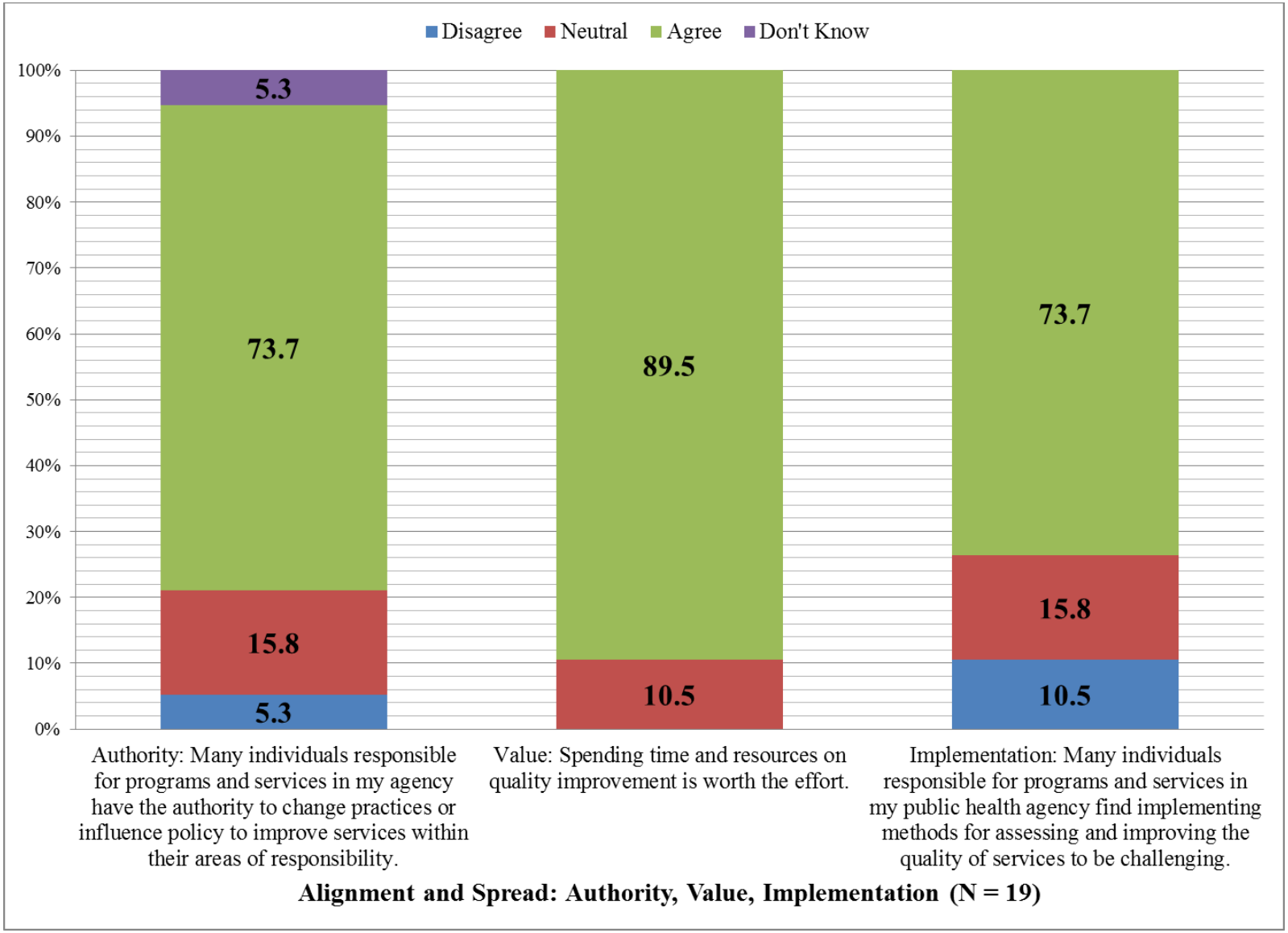
- 44.4% (n = 8) of LHDs indicated that quality measures or metrics were used for any QI program or intervention.



Alignment and Spread: Integration



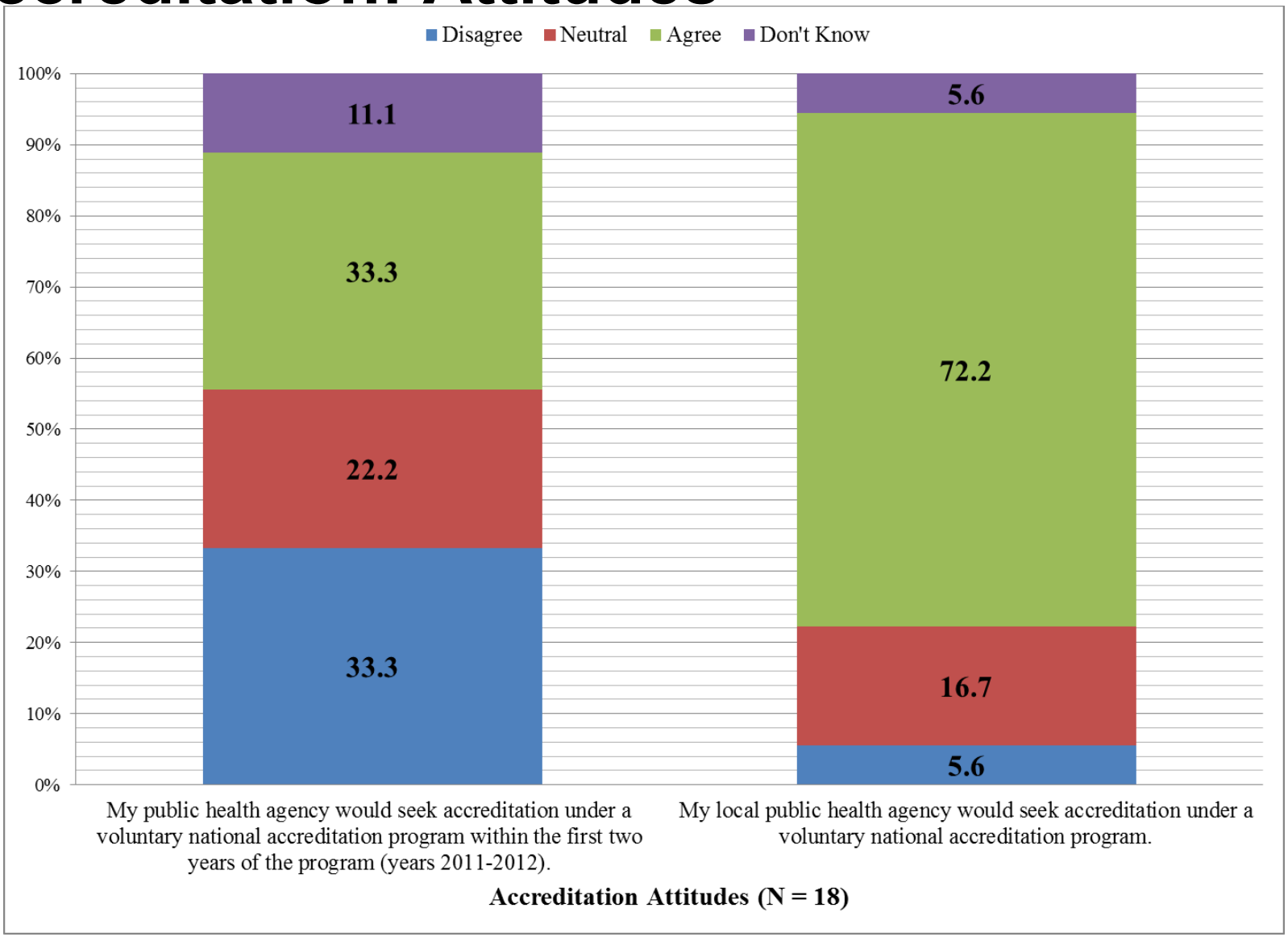
Alignment and Spread: Authority, Value, Implementation



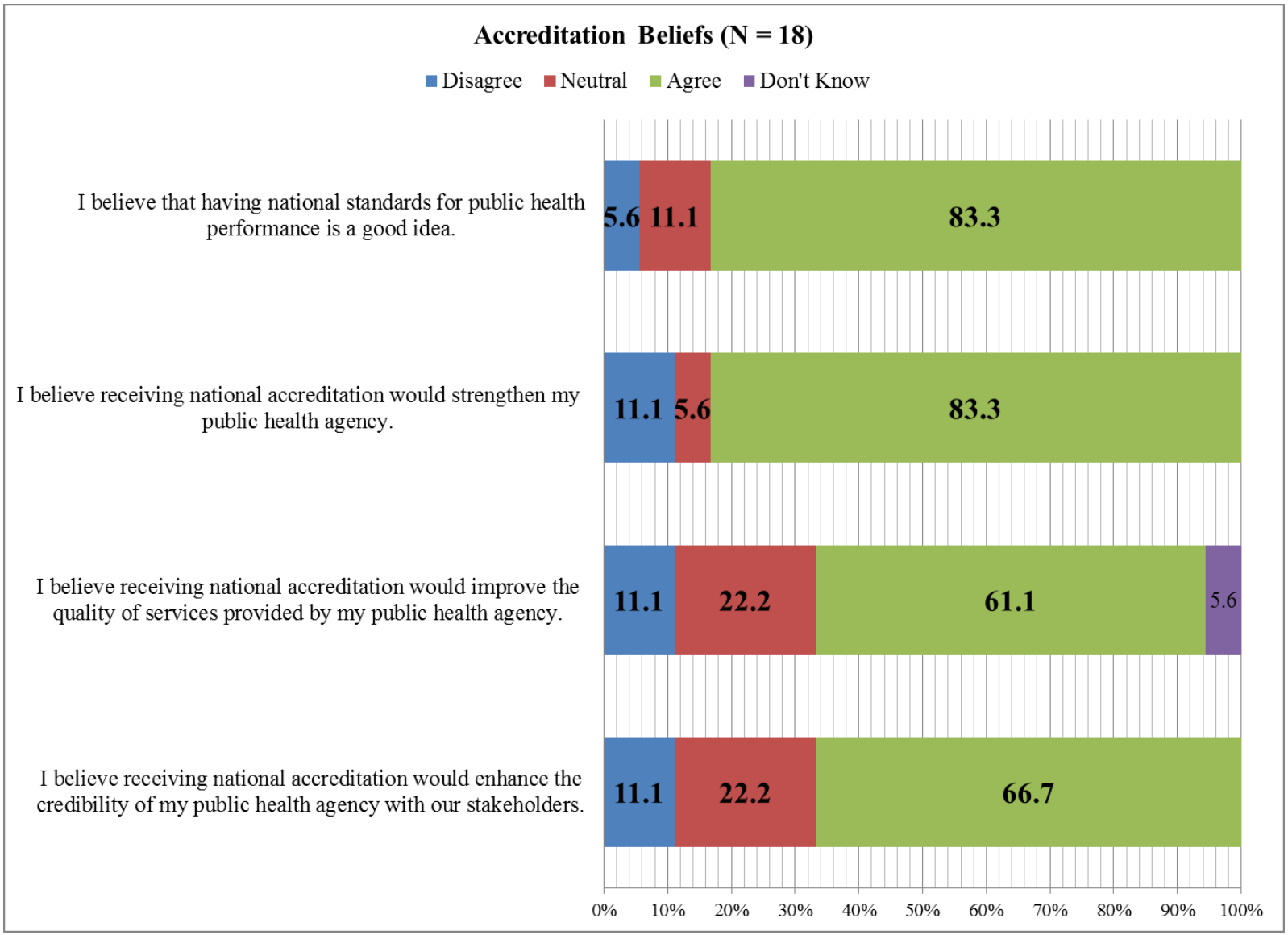
QI Maturity

QI Maturity Domain & Dimension	Sum of Scores Range	N	%	Mean	Median	Min	Max
1. Organizational Culture	7 – 35	19	---	31.4	32.0	24.0	35.0
a. Commitment	3 – 15	19	---	13.5	14.0	9.0	15.0
b. Collaboration	4 – 20	19	---	18.0	18.0	15.0	20.0
2. Capacity and Competency	10 – 50	17	---	36.5	37.0	23.0	48.0
a. Skills	2 – 10	18	---	7.7	8.0	4.0	10.0
b. Methods	6 – 30	19	---	22.6	22.0	14.0	29.0
c. Investment	2 – 10	17	---	6.1	6.0	2.0	10.0
3. Quality Improvement Practice							
a. Ever implemented QI (N = 18)							
Yes	---	15	83.3	---	---	---	---
No	---	3	16.7	---	---	---	---
b. Number of projects, last 12 months	---	8	---	3.8	3.0	0.0	15.0
c. Length of time engaged in QI (N = 18)							
No systematic QI efforts in place	---	3	15.8	---	---	---	---
<1 year	---	1	5.3	---	---	---	---
1-2 years	---	4	21.1	---	---	---	---
3-4 years	---	2	10.5	---	---	---	---
5+ years	---	9	47.4	---	---	---	---
d. Use of QI Strategies (N = 15)							
None	---	2	13.3	---	---	---	---
QI model, technique, or metric	---	2	13.3	---	---	---	---
Combination of QI model and technique, QI model and metric, or QI technique and metric	---	3	20.0	---	---	---	---
QI model, technique, and metric	---	8	53.3	---	---	---	---
4. Alignment and Spread	11 – 55	17		37.3	36.0	26.0	44.0
a. Integration	8 – 40	18		27.2	26.5	18.0	34.0
b. Authority	1 – 5	18		4.0	4.0	2.0	5.0
c. Value	1 – 5	19		4.3	4.0	3.0	5.0
d. Implementation	1 – 5	19		1.8	2.0	1.0	3.0

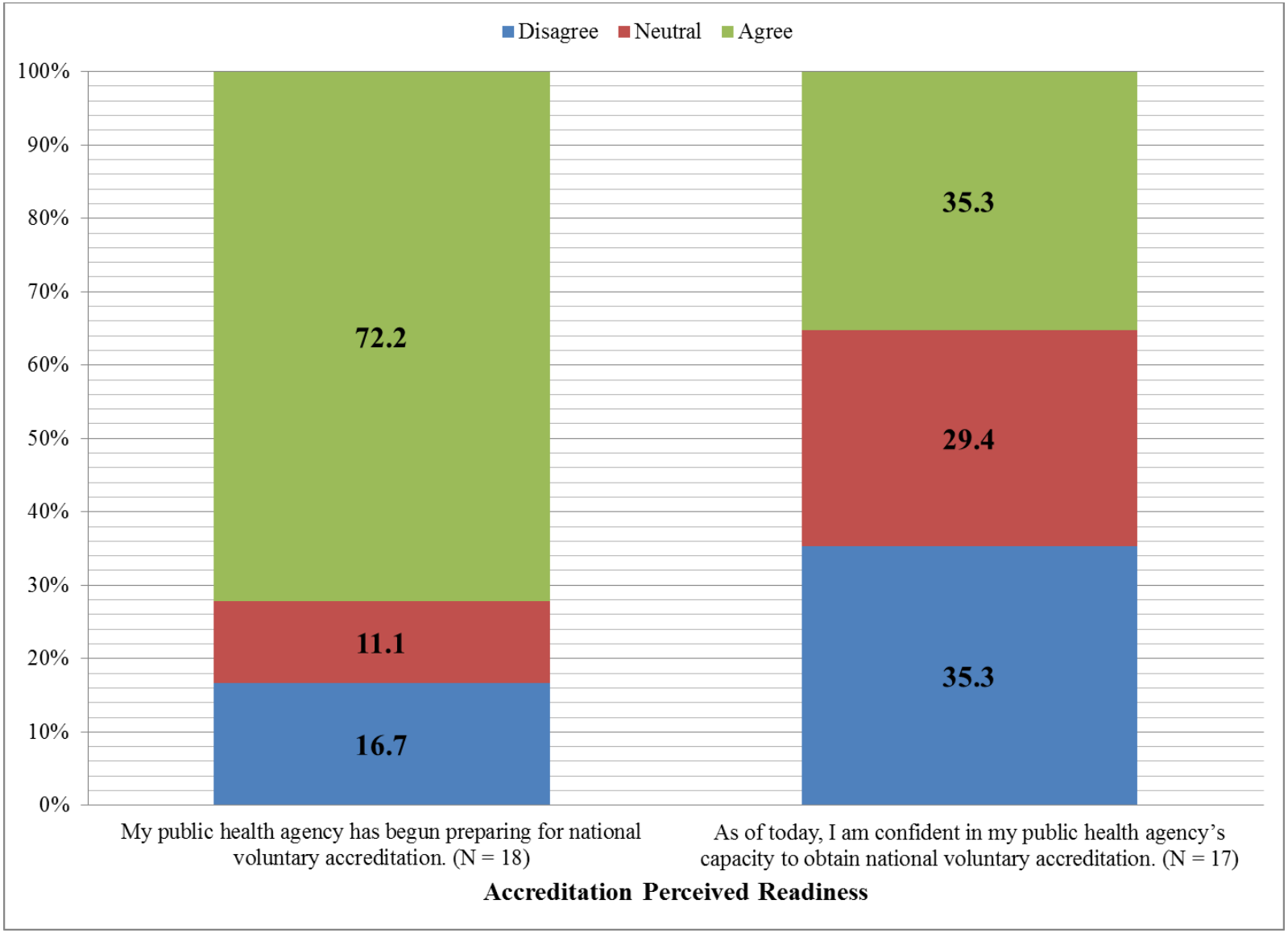
Accreditation: Attitudes



Accreditation: Beliefs



Accreditation: Perceived Readiness



Quality Improvement Maturity and Accreditation

- Attitudes Towards Accreditation:
  - A commitment to QI and the length of time engaged in QI are positively associated with attitudes towards seeking voluntary national accreditation.
  - The use of QI strategies is positively associated with the attitudes towards seeking voluntary national accreditation within the first two years of the program.
- Beliefs in Accreditation:
  - Valuing QI is positively associated with believing that national standards are a good idea.
  - The ability to apply QI methods, integration of QI policies and practices, and the alignment and spread of QI within an agency are positively associated with the belief that accreditation would strengthen the agency.
- Perceived Readiness for Accreditation:
  - A commitment to QI is positively associated with the commencement in preparing for accreditation.
  - The use of QI strategies and the integration of QI policies and practices within the agency are positively associated with the confidence in the agency's capacity to

Qualitative Component

- Conduct site visit interviews on selected Nebraska LHD sites to collect more in-depth qualitative information on LHDs' strategies and planning for QI, accreditation, and general performance management.

LHD Site Visit Interviews

- Purpose of the qualitative study
  - Identify strengths and weaknesses in essential service areas
  - Examine the readiness for accreditation for regional LHDs in Nebraska
  - Examine the relationship between QI and accreditation to inform how QI and accreditation strategies can be better integrated.

Sites

- Four sites chosen for variation in composition and levels of readiness

Methods

- Seven interviews completed
  - Directors
  - Staff involved with quality improvement and accreditation
- Interviews were transcribed and coded for themes using QSR NVivo 10

Results

- Strengths in 10 Essential Service Areas
  - Essential Service 2
    - Diagnosing and investigating health problems and health hazards in the community
  - Essential Service 4
    - Mobilizing community partnerships and action to identify and solve health problems

Results (cont.)

- Weakness in 10 Essential Service Areas
  - Essential Service 10
    - Research for new insights and innovative solutions to health problems

Results (cont.)

- Challenges to Implementing Accreditation
  - Feeling overwhelmed by the process and confusion of what was required
    - *"I think when we first started, it was just getting the big pieces together….what really do they mean, you know, what really are they looking for when you are gonna submit…I think those are some challenges because we are still not quite sure what the PHAB standards and what they are asking for"* (LHD Staff Member)

Results (cont.)

- Challenges to Implementing Accreditation
  - Competing priorities of existing daily tasks and staff time needed for compiling the documentation
    - *"Most people are fairly busy managing their programs, the challenge will be having them to be able to take the time to gather their documents in conjunction with their daily tasks and to fill up the folders that we have in the common drive…I think the challenge for us will be for staff to have time to do it."* (LHD director)

Results (cont.)

- Challenges to Implementing QI
  - Very similar to challenges in implementing QI: Competing priorities and a lack of staff time
    - *"We are incredibly short staffed, not only we are out of space, but everybody is doing many jobs, so is this having the time, quality takes time, it saves time, but it takes time…..We will never have enough resources."* (LHD Director)

Results (cont.)

- Challenges to Implementing QI
  - Early adopter LHD indicated that their existing quality improvement infrastructure was helpful in beginning the process for accreditation
    - *"We already had a firm, we were already doing a lot of stuff. So for example, there are a lot of HR stuff in PHAB and under the human resources section [of the PHAB standards and measures]. You know for us that is like a check, check, check, check, you know we were doing all of that."* (LHD Director)

Results (cont.)

- How these challenges are addressed
  - Team-based approach with in LHDs
    - *"We've had teams for a long time….all of our teams are effective"* (LHD Director)

Results (cont.)

- How these challenges are addressed
  - Early adopters of QI providing technical assistance to late adopters of QI on accreditation
    - *"That's one of the health departments from the conference calls, that [name removed] would get on and discuss, talk about the progress they had made. I actually called her and individually got to talk to her on the phone and she helped me quite a bit with a plan of how to set up our common drive on the computer to be able to store the documents."* (LHD Staff Member)

Results (cont.)

- How these challenges are addressed
  - Sharing existing copies of policies, procedures and other documentation
    - *"Now we are moving to a new capability, that will be easier, share documents and that kind of stuff. We do plan to borrow and steal anything what we can get"* (LHD Director)

Results (cont.)

- Relationship between QI and accreditation
  - Not separable, one lead to another
    - *"I think accreditation is part of the quality improvement process for health Department. They go hand-in-hand. And I know you need to have quality improvement plan to be accredited. Like you need a strategic plan and the only to fit together and make sense so it's just one piece of one big animal."* (LHD Director)

Results (cont.)

- Relationship between QI and accreditation
  - Accreditation as a driving factor for QI
    - *"Accreditation is showing us where we are falling down in QI. That is not necessarily a positive because it opens up little weak areas that I do not like to see but that are there. But it is helping me see what they are and where they are. So it helps me correct that if I was not doing accreditation I might not be purposely might be blind to some of these. Yes, so accreditation is helping with QI because as we go through with it I know I am going to see more areas where we are not doing anything. Oh my God, how could it go unattended because it has not come across in any of the programs of the staff are doing it."* (LHD Director)

Results (cont.)

- Readiness for accreditation
  - Variation in levels of readiness
    - Early adopter of QI has submitted their letter of intent and will have site visit in 2013
    - Later adopters of QI have some of their pre-requisites done
      - Will apply in 3-5 years

Results (cont.)

- Opportunities in QI and Accreditation
  - QI will improve LHD activities through documented evaluation and better serving the public
    - *"Even a QI project around something like that [fit testing respirators], it is gonna tell me when the best time to get this evaluation….those evaluation will get us set up and that is like every program and every grant have that opportunity to look at it, and get that feedback."* (LHD Staff Member)

Results (cont.)

- Opportunities in QI and Accreditation
  - Possible funding opportunities to those accredited
    - *"One of the benefits that has been dangled in front of us has been perhaps if you have been accredited, in the future, there will be few less hoops to jump through when you are applying [for a grant]. Perhaps, you are not accredited, in the future, you might not be able to apply for certain types of funds. And those, I think, would be all important."* (LHD Director)

Results (cont.)

- Opportunities in QI and Accreditation
  - Improving QI and standardization of processes will make LHD better
    - *"I will say that it is gonna make us all obviously more standard everywhere…we all are gonna be, you know, talking same language, we all know that we are gonna have certain things that we should have, I think that to me, is the biggest thing, that is all how we all [will be doing the same things]"* (LHD Staff Member 1) *"Kind of a framework of excellence"* (LHD Staff Member 2)

Results (cont.)

- Role of the State Office of Community and Rural Health in Accreditation and QI in LHDs
  - Provided funding through the Public Health Association of Nebraska
    - Pre-requisites for accreditation
    - Self-assessments of PHAB
    - Mind Manager software
    - QI plan or project

Results (cont.)

- Role of the State Office of Community and Rural Health in Accreditation and QI in LHDs
  - *"So all of those trainings last fall helped a lot and there's also monthly conference calls for a couple of workgroups that we have within the state. There's one that works with policies and procedures. And there's another one that works with Mind Manager workgroup. So it's nice to get on these conference calls and learn from the people that develop the Mind Manager software, but also when we do have our conference calls within the state we learn from other health departments what they've done. "* (LHD Staff Member)
  - *"And if we didn't have [consultant] and if you guys had not made that possible, possibly we would all be light years behind and it has been a huge benefit."* (LHD Director)

References

- Joly, B., Booth, M., Mittal, P., & Shaler, G. (2012). Measuring quality improvement in public health: the development and psychometric testing of a QI Maturity Tool. *Evaluation & The Health Professions*, *35*(2), 119-147.

Other Meeting Agenda Items

PUBLIC HEALTH Practice-Based Research Networks
National Coordinating Center

- **PBRN Research Update**
  - **April 8-9 PBRN Grantee Meeting Agenda**
  - **Session I: The State of the Public Health PBRN Program**
  - **Session II: Emerging Opportunities**
    - **CDC Injury Prevention**
    - **Multi-Network D & I Project Visioning: Preparation materials to follow**
  - **Working lunch**
    - **D & I Pilot Project Opportunity**
    - **PHAST Update**
  - **Session III: Breakout Discussions**
  - **Session IV: Closing Discussion**
  - **Joint Grantee Session-AcademyHealth Workshop: PHSSR Translation and Dissemination**

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Other Meeting Agenda Items

- **Research Opportunity: Measuring Integration Between Primary Care and Public Health Using Social Network Analysis**
  Deborah Porterfield, MD, MPH, Research Triangle Institute
- **Research Opportunity: National Center for Injury Prevention and Control**
  Lynne Jenkins, PhD, CDC Injury Center
- **Dissemination Opportunity: DVD Intervention for HPV Vaccination**
  Elisia Cohen, PhD, and Margaret McGladrey, KY Prevention Research Center
- **Reminders (next slide) & Questions and Wrap Up**

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Reminders: Upcoming Meetings and Events

- March 26, 2013: AcademyHealth PHSR Webinar: Traditional and New Methods for Disseminating What Works 1-2:30pm ET
- March 29, 2013 PBRN Quarterly Training Webinar: Cost Estimation Methods: Strategies and Examples in PHSSR 3-4:30pm ET
- April 1, 2013: AcademyHealth ARM and PHSR IG PBRN Scholarships applications due
- April 8-9, 2013: Public Health PBRN Program Annual Grantee Meeting, Lexington, KY
- April 9-11, 2013: PHSSR Keeneland Conference, Lexington, KY
- June 25-26, 2013: AcademyHealth Annual Research Meeting, and PHSSR Interest Group Meeting, Baltimore MD
- July 10-12, 2013: NACCHO Annual Sharing Session, Dallas, TX

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