

The background features a gradient from light green on the left to dark blue on the right. It is overlaid with several faint, semi-transparent circular elements. On the left side, there is a large circular scale with numerical markings from 140 to 260 in increments of 10. Other circular patterns include concentric circles, dashed lines, and arrows, some of which are partially visible or cut off by the frame.

# 9-1-1 LEADERSHIP PERCEPTIONS OF EVIDENCE- BASED QUALITY IMPROVEMENT

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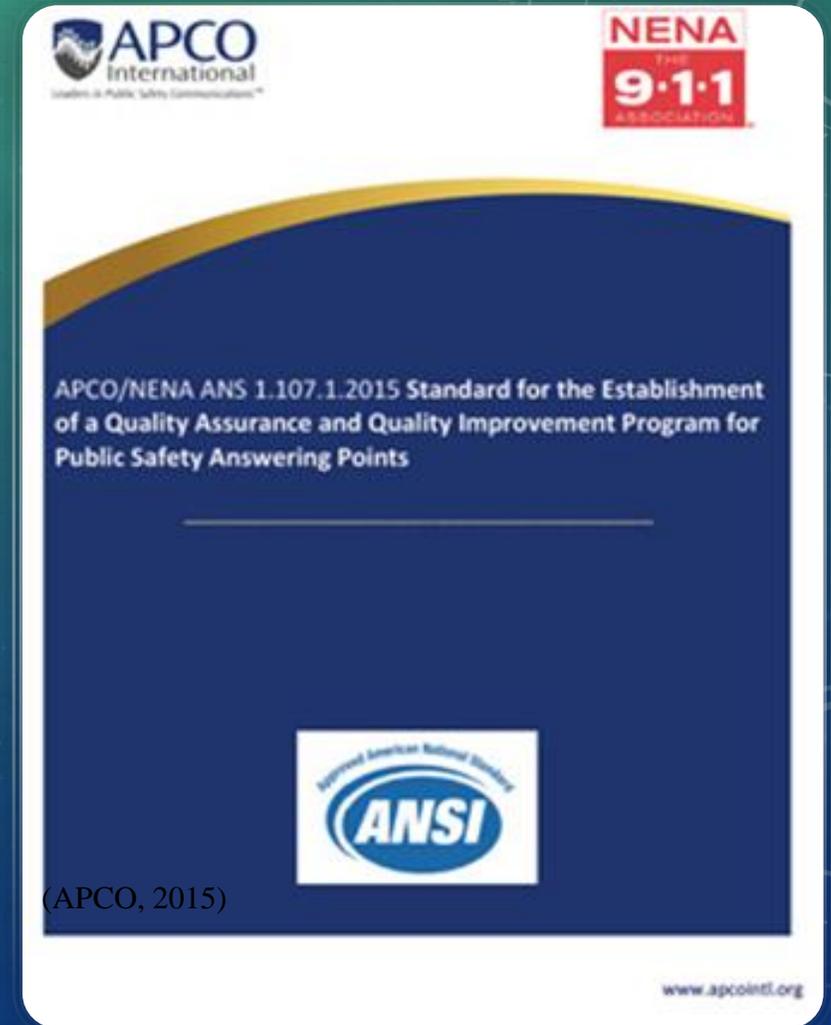


# INTRODUCTION

- First 9-1-1 call in 1968
- The Quality of 9-1-1 / PSAP Service Matters
  - DeLong v. County of Erie
  - Denise Amber Lee
- The quality of service provided by PSAPs is inconsistent due to lack of mandatory standards of care at the national, state, and local levels
- In 2015, the PSAP community created a new minimum standard for PSAP Quality Improvement

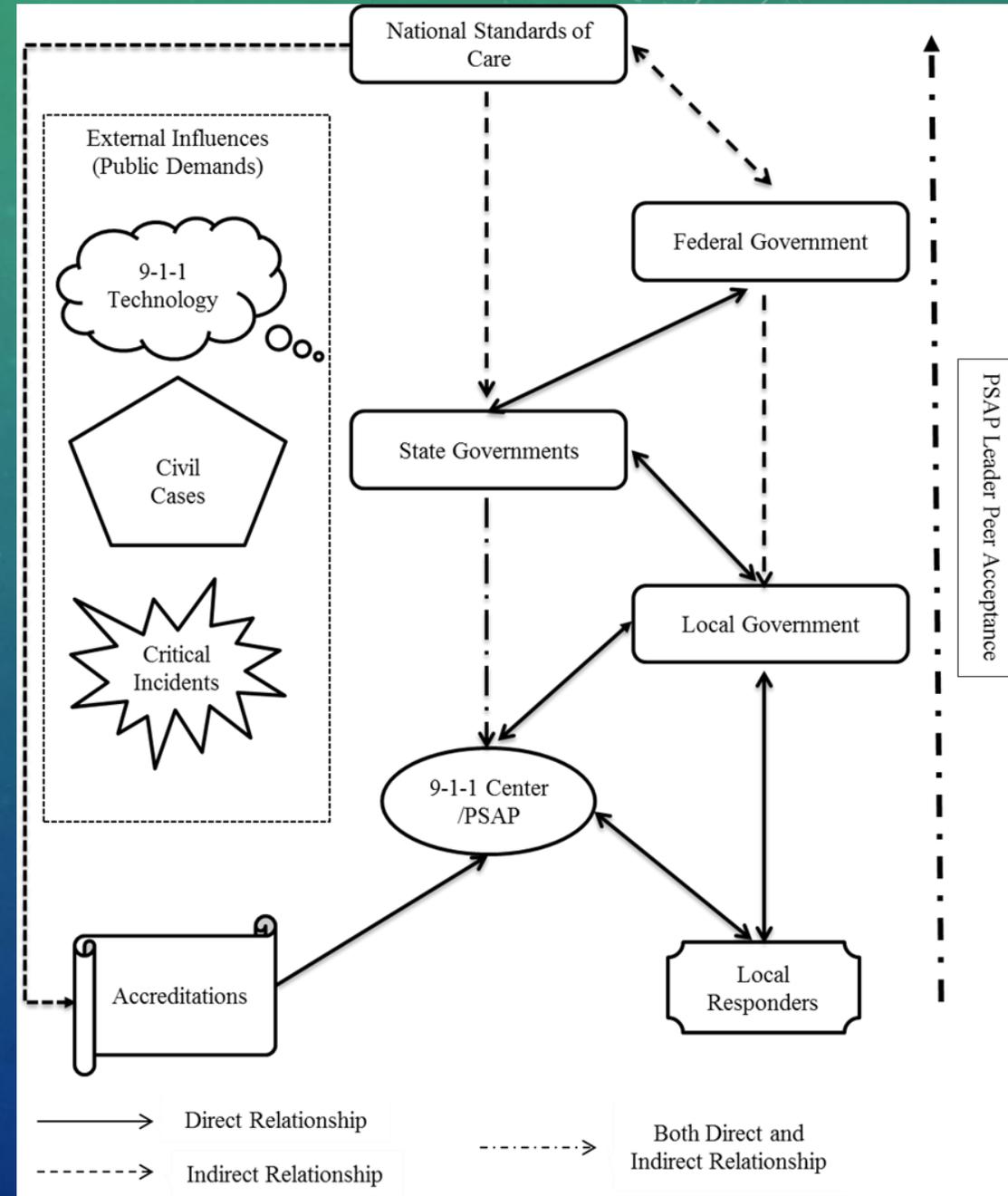
# GENERAL PERSPECTIVE

- Government Leaders Face Important Decisions Regarding Quality Improvement
  - What standards are the correct standards?
  - Who should control what standards are mandatory?
  - Who is going to pay?
- Evidence-Based Management (EBM) Theory
  - “Basing of managerial decisions on the best available evidence”
  - Research indicates EBM may improve quality of care but limited research about PSAP leadership



# PSAP STANDARDS MODEL

- PSAP Standard Adoption
  - Multiple influences from different sources
  - Model reflects interactions
- External Factors
  - Technology
  - Civil Cases
  - Critical Incidents
- Governance
  - What level of governance?
  - Usually tied to funding
- Accreditation
  - How much influence?



# RESEARCH CONTEXT

- There are 6,359 Primary PSAPs in the United States (FCC, 2017)
  - There are 191 primary PSAPs in the State of New York
  - There are 56 designated county wireless PSAPs, excluding the City of New York
- NY Established Minimum Standards for PSAPs in 2002
  - They only apply to wireless PSAPs
  - Some NYS leaders think all PSAPs should follow the same standards
  - NYS standards do not address quality improvement

# RESEARCH QUESTIONS

- How do PSAP leaders support effective implementation of quality care?
  - How do NYS wireless PSAP leaders measure performance based on their definition of quality?
  - How do NYS wireless PSAP leaders perceive factors related to quality improvement?
  - Do PSAP leaders believe evidence-based management models, such as national standards of care, should supersede local and personal experience models?
  - How do NYS wireless PSAP leaders' views align with evidence-based management theory?

# CURRENT LITERATURE TOPICS



# RESEARCH DESIGN

- Participants
  - 3 Former, 9 Current NYS County Wireless PSAP Leaders
  - 4 Focus Groups with 3 attendees each
  - Semi-Structured, Open-Ended Interview
- Data Analysis
  - Directed Content Analysis
  - Multi-step iterative process
  - Codes coalesce to more abstract categories, super categories, then themes

**Table 3.** Level I Coding With Meaning Units.

Original text (meaning unit highlighted in relation to applied code)	Code(s) applied to meaning unit
I try to eat well. My wife seems to do a good job with that stuff and everything. I am fairly active around the house and stuff	Eating well Remaining active
I've recently become semi-retired, so even though retirement means like relaxation, it really hasn't. It has just given me more work to do around the house and stuff, and again, having children of my own, basically, I not only have a honey-do list from wife, I have a honey-do list for my two charming daughters	Becoming retired Working around the house Having multiple honey-do lists
Again too, I'd like to be around as long as possible. I enjoy life. I try to enjoy it to the fullest. I'd like to be—I want to live life. I don't want survive, I guess is what I'd say. I've seen too many instances of this. My mother-in-law is a prime example. She is in an assisted-living facility, and I really think she's just about, I don't want to say given up and stuff, but she's not living. She is surviving. I think that's sad. I really do. I think you are going to get out of life what you put into life. I think if she would put a little more effort into life, her life would be a lot more fulfilling and rewarding to her and basically to people around her	Trying to enjoy life vs. surviving life Being sad when people give up Getting out what you put in

# RESULTS: DEFINING AND MEASURING PSAP QUALITY

- Defining Quality

- “In the 911 world...it really boils down to two things: fast, accurate”
- “The technology aspect comes in, and it's great. ....But I think sometimes they depend too much on the technology”
- “They've done it 1,000 times...not really following the protocol”

- Measuring Quality

- “It's all arbitrary, I think. That's why it's important to have standards at higher levels, if you will. State standards.”
- “*This is difficult in most people's instances* [emphasis added], you really do need a formalized plan of reviewing a certain number of calls”

# RESULTS: FACTORS RELATED TO QUALITY

- Buy-In (Stakeholder Engagement)
  - “Sometimes *you* are the person who isn't giving the buy in, right? *Yourself, in person, in your own head*”
  - “It was a great idea and I would have probably got full buy-in except I approached it wrong”
  - “There was no buy-in from the supervisors, the employees, from *anybody*, except this [9-1-1 operations] board that supported this one person”
- Training
  - “[The] best way to improve is just ... continuous training.”

# RESULTS: FACTORS RELATED TO QUALITY (CONT.)

- Staffing and Time

- “We do some QA/QI but, I'll admit, we don't do it enough. And we don't do it enough because they don't have the staffing to do it.”
- “*Formalized plans [to review calls], and the time to do them are a luxury, and particularly in New York State because of funding [emphasis added].*”
- “We basically have no QA/QI at all...We just don't have anybody to do that.”
- “Your supervisors are acting as call takers [front-line telecommunicators], your managers are doing all the things the manager's do, *who has the time?*”
- “*Dispatchers [telecommunicators] need supervisors, not standing over top of them all the time, but they need somebody in the room to defer a quick policy question...and typically [they] don't have that. Again, a funding situation*”

# RESULTS: FACTORS RELATED TO QUALITY (CONT.)

- Organizational Culture

- “When dispatchers work at a 9-1-1 center, and their geographic area is underwater, and they don't know if they have a house to go home to, but they're willing to stay...*that's the kind of people that work for us.*”
- “*Successes are celebrated by all, and so are failures.*”
- “I have an employee that is horrible. She is so rude to callers...And [we] can't get rid of her. She's protected, between civil service and the union.”

- Accreditation

- “As an accredited agency, those big aspects [of quality assurance / quality improvement] are there, *forced by the standards.* And it's not a bad force, it's a good force [for] subtle changes to try to improve quality”

# RESULTS: PSAP STANDARDIZATION

- “For us it was EMD. I mean hands down. We know that providing that service makes a big difference in calls. How do we know? Because we save lives, and we've seen it happen.”
- “APCO and NENA have great standards to go on. I think though, remember, *that's a template that they give you*, and you have to modify it based on the needs of your own agency”
- “I don't necessarily know that procedures or standards that exist outside your agency are bad or good, right? It's *how* and *why* you chose to implement them”
- “It’s becoming a national standard that a lot of other agencies are using. *We should join the crowd*”

# RESULTS: EVIDENCE BASED MANAGEMENT

- Local Data
  - “As you measure your reviews, your evaluations, you're measuring everything, you have to take each thing and put it together as a whole package...If you don't use multiple tools, then you're not taking and measuring it right.”
- 9-1-1 as a New Discipline
  - *“They forget that there's a 9-1-1 dispatcher, and those people have to know it all. They have to know police, fire, and EMS, and they have to know the dispatch operations in a 911 center.”*
  - “As soon as we went from three-by-five cards and crayons to real live computers, it became a profession, because the computer programming was very specific to the dispatch function .”

# RESULTS: OTHER FINDINGS

- Peers

- “I think one of the best things that ever happened in the state was the formation of the [New York] State 911 Coordinators Association.”
- “We may be doing something in good faith, only to find out that everybody else who answered that same question is saying “No”. Or it reinforces when it's “*Yeah, we're kind of normal...Okay, we are doing like others.*”
- “I think it's important to understand [that] when it comes to standards, procedures, and best practices...at some point in the past, it started out as somebody was doing it ‘that’ [a new] way, and someone talked to their neighbor and said, ‘How are you doing it?’”

# RESULTS: OTHER FINDINGS (CONT.)

- NYS Governance

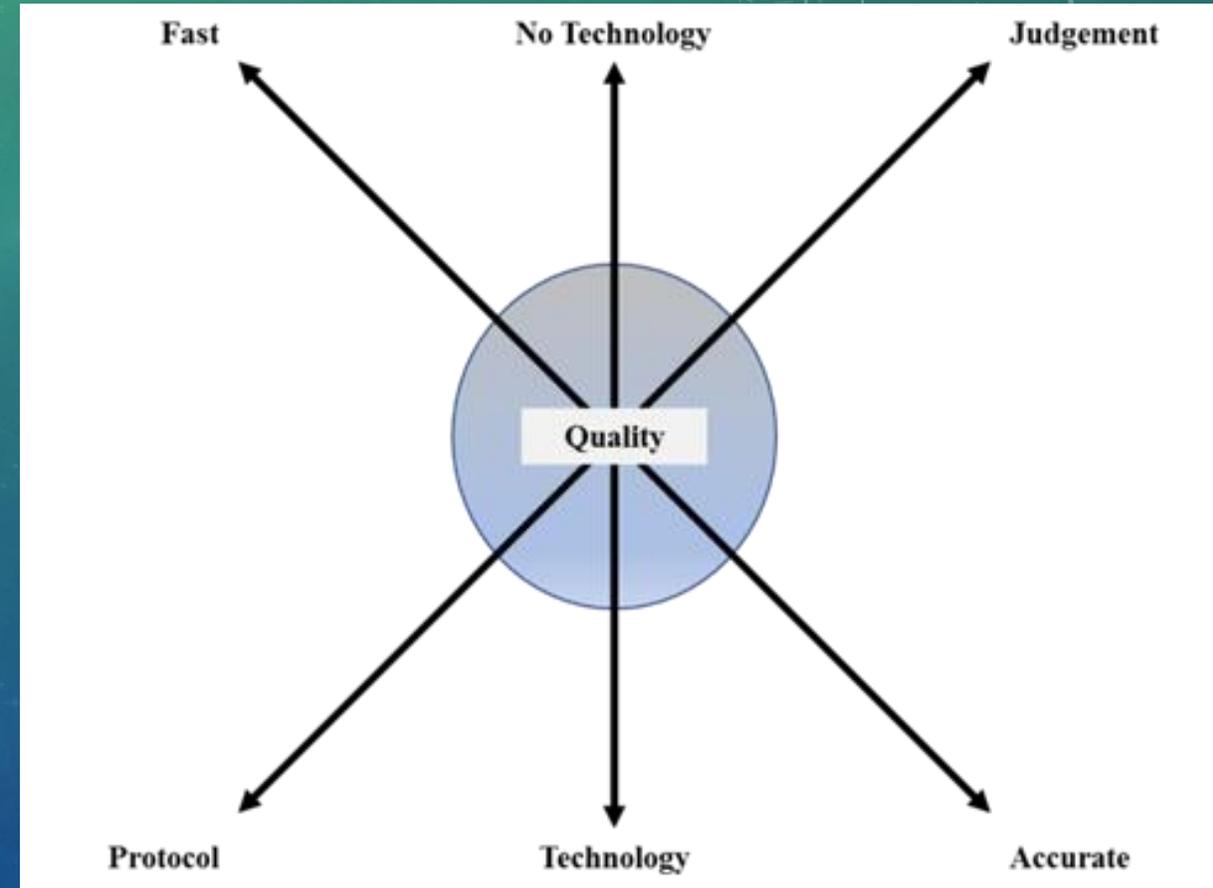
- “It's important to have standards at higher levels, if you will...New York State's a perfect example. Having a set of standards that county wireless PSAPs have to meet, that every other PSAP doesn't have to meet, there's a perfect example of [why] everything's so diverse”
- “15 years ago...57 [county] 9-1-1 coordinators in New York State [would] say, “We don't need a state 9-1-1 coordinator, we can do it ourselves. We don't need the state telling us what to do.... Now it's completely opposite, because we need to have coordination.”

- Technology

- “We had issues with vendors not giving us proper data information on 9-1-1 ...And when one county's talking to a vendor, it's not a big deal. *When you have 62 counties talking to one vendor, that's a big deal, and they listened.*”

# KEY FINDINGS

- PSAP quality is defined as achieving balance along spectrum:
  - Fast AND Accurate
  - Use Judgement AND Protocol
  - Use Technology AND “Go Old School”
- Quality definition similar to other disciplines
  - “Yes, use your clinical judgement but then no, you’ve got to stick to the algorithms” Russell (2012)



## KEY FINDINGS (CONT.)

- PSAP quality is inconsistently measured
  - Quality requires training, constant reinforcement and constant reviews
  - However, reviews take a “back burner” to other issues due to staffing
- Quality improvement requires time, staff, culture, and relationships
  - Time and human resources identified as barriers
  - First-Line supervisor serves a critical role
  - Accreditation may modify culture positively but not required by PSAP leaders
  - Buy-In (stakeholder engagement) is critical to successful implementation

# KEY FINDINGS (CONT.)

## PSAP Quality Improvement Factors

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### Positive

Training

Reviews

Accreditation

### Neutral

Organizational Culture

Stakeholder Engagement

### Negative

Time

Staffing

Funding

# RECOMMENDATIONS FOR NYS GOVERNANCE

- Increase PSAP Funding Allocation
  - \$10M of \$185M collected in 2016 was sent via grants to PSAPs
  - Pre-paid wireless surcharges are opportunity for increased revenue sharing to accomplish aligned goals
  - Increase to 10% of revenue collected would allow PSAPs to add additional supervisors and quality improvement staff needed to meet national standards of care.
- Apply standards to all PSAPs including 2015 APCO/NENA/ANS Comprehensive Quality Improvement standard
  - Tied to increased funding (no unfunded mandates)
  - Tied to NYS standards inspection regime (funding = compliance)

# OTHER RECOMMENDATIONS

- DHSES/OIEC should conduct additional research to ensure funding is achieving goals (Evidence-Based Management)
  - Use NYS PSAP Operations Grant application form to collect data
  - Data does not impact funding algorithm
  - Data will be used to inform SIECGB on current state of NYS PSAP quality improvement programs and where shortfalls exist
  - Need both quantitative data and qualitative interpretation

# QUESTIONS?

A copy of the entire dissertation can be located at: [https://fisherpub.sjfc.edu/education\\_etd/353/](https://fisherpub.sjfc.edu/education_etd/353/)

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