



Analysis of Medical and Public Health Trends in After-Action Reports/Improvement Plans*

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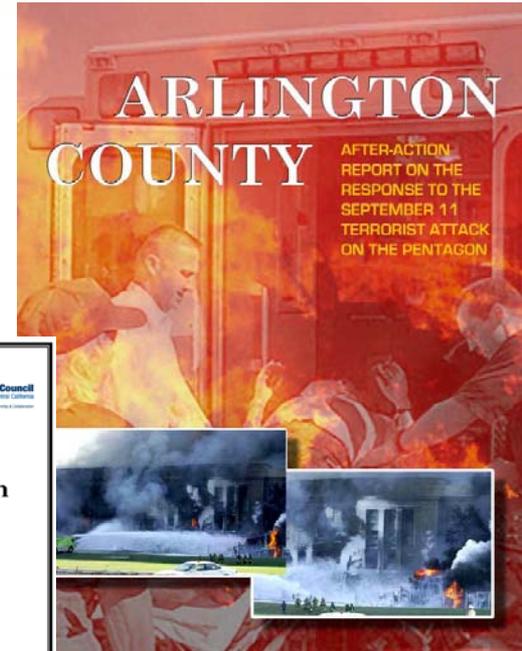
Emergency Care Coordination Center (ECCC)

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**Analysis performed by Stimson Center, Washington, DC*



- Introduction
- Objectives
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- Results
- Discussion
- Conclusions




 San Francisco Department of Public Health
 San Francisco Infection Control Working Group
 Hospital Council Emergency Preparedness Task Force
 

2006 Pandemic Influenza Infection Control Tabletop Exercise
 September 14, 2006





After Action Report

Exercise Participants:

Infection Control Practitioners, Emergency Preparedness Coordinators and other staff from San Francisco Hospitals: California Pacific Medical Center, Chinese Hospital, Kaiser Permanente, Laguna Honda Hospital, Saint Francis' Hospital, Saint Luke's Hospital, Saint Mary's Hospital, San Francisco General Hospital, Seton Medical Center, San Francisco Veterans' Affairs Medical Center, University of California at San Francisco.

City and County of San Francisco staff: San Francisco Department of Public Health – Communicable Disease Control & Prevention Section, Emergency Medical Services, Occupational Safety and Health, Office of Policy and Planning, Public Health Laboratory; San Francisco Office of Emergency Services.

Exercise Observers: California Department of Health Services

Attachments: Attachment A: Exercise Scenarios
Attachment B: Questions from hospitals

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INTRODUCTION

- After-action reports/ Improvement plans (AAR/IP)
 - The main product of the evaluation and improvement planning process.
 - 2 components
 - ❖ AAR – captures observations of an exercise/incident and makes recommendations for post-exercise/incident improvements
 - ❖ IP – identifies specific corrective actions, assigns them to responsible parties and establishes targets for their completion.
 - Even though drafted separately, the AAR and IP should always be printed and distributed jointly as a single AAR/IP following an exercise/incident.



MATERIALS AND METHODS

- The DHS Lessons Learned Information Sharing (LLIS)
- Seventy-two AARs/IPs (46 exercises/26 incidents) were selected and analyzed by Stimson Center researchers (JF & CG) meeting one or more of the following inclusion criteria:
 - the AAR/IP had a significant focus on medical, public health, and emergency medical service (EMS) issues;
 - the AAR/IP was drafted by a medical, public health, or EMS organization; and/or,
 - the AAR/IP's event received notable attention within the areas of medical, public health, or EMS.



MATERIALS AND METHODS

- The following information was collected for each AAR/IP:
 - Title
 - Author
 - Publication date
 - Synopsis
 - Recipient
 - Exercise/event date and location(s)
 - Participating organizations (local, state, federal, international, private sector, non-governmental, military)



MATERIALS AND METHODS

- Mission Objectives
 - If the objectives were unclear, the research team assigned “none.”
 - Mission objectives were categorized using TCL definitions.





MATERIALS AND METHODS

- Using DHS Target Capabilities List (TCL) language and definitions
- 17 broad categories were identified:
 - Communications
 - Citizen Evacuation and Shelter-In-Place
 - Critical Resources Logistics and Distribution
 - Emergency Operations Center Management
 - Emergency Public Information and Warning
 - Emergency Triage and Pre-Hospital Treatment
 - Epidemiological Surveillance and Investigation
 - Intelligence and Information Sharing and Dissemination
 - Isolation and Quarantine
 - Mass Care
 - Mass Prophylaxis
 - Medical Supplies Management and Distribution
 - Medical Surge
 - On-Site Incident Management
 - Planning
 - Responder Safety and Health
 - Volunteer Management and Donations



MATERIALS AND METHODS

- Quality Rating*
 - The descriptive categories were assigned a numerical value in order to quantify the data. After review, each AAR/IP was assigned to one of the following categories:
 - ❖ “Detailed and Complete” = 1
 - ❖ “Somewhat Detailed and Complete” = 2
 - ❖ “Not Detailed or Complete” = 3

- *(reviewed by JF & CG)



MATERIALS AND METHODS

- “Detailed and Complete” = 1
 - **complete** logistical information (date of incident or exercise, specific location(s) and jurisdictions);
 - author and publication date;
 - names of **all** participating organizations;
 - **specific** points of contact for the exercise/one or more lead participating organizations;
 - **clearly described** mission objectives and goals;
 - descriptions of the exercise activities or incident responses in **sufficient detail** to allow non-participants to understand specific actions, outcomes, and lessons learned;
 - observations linked to **all** exercise objectives or event actions;
 - proposed corrective actions (in any level of detail)



MATERIALS AND METHODS

- “Somewhat Detailed and Complete” = 2
 - **incomplete** logistical information (date of incident or exercise, general location(s) and jurisdictions);
 - publication date;
 - **general descriptions** of all participating organizations (i.e., “health departments in tri-country area”);
 - at **least one** point of contact for the exercise;
 - **clearly implied** mission objectives;
 - descriptions of the exercise activities or incident responses in **sufficient detail** to allow non-participants to understand actions and outcomes;
 - observations linked to **at least some** exercise objectives or actions;
 - proposed corrective actions (in any level of detail) for **some** but not necessarily all observations.



MATERIALS AND METHODS

- “Not Detailed or Complete” = 3
 - **partial** logistical information (missing date of incident or exercise, location(s) or jurisdiction);
 - general descriptions of **some but not necessarily all** participating organizations; partial or no clear mission objectives;
 - descriptions of exercise activities or incident responses in **insufficient detail** to allow interpretation by non-participants;
 - observations **unlinked** to exercise objectives or event actions;
 - **no proposed** corrective actions (in any level of detail)



Quality Level	Improvement Plan Rating Description
1	The improvement plan is based on clearly defined exercise objectives, directly addresses problems or lessons learned with specific actions or activities and designates an individual and/or organization responsible for implementation including defined timetables.
2	The improvement plan is based on exercise objectives, specific problems or lessons learned and addressing an individual and/or organization responsible for the implementation of an improvement plan. The plan does not include defined timetables.
3	The improvement plan is based on exercise objectives and links problems or lessons learned to specific actions or activities. The plan does not include a defined timetable and does not identify an individual and/or organization responsible for implementation of an improvement plan.
4	The After-Action Report lists observations/recommendations, but does not include a specific improvement plan.
5	The After-Action Report does not include an improvement plan.

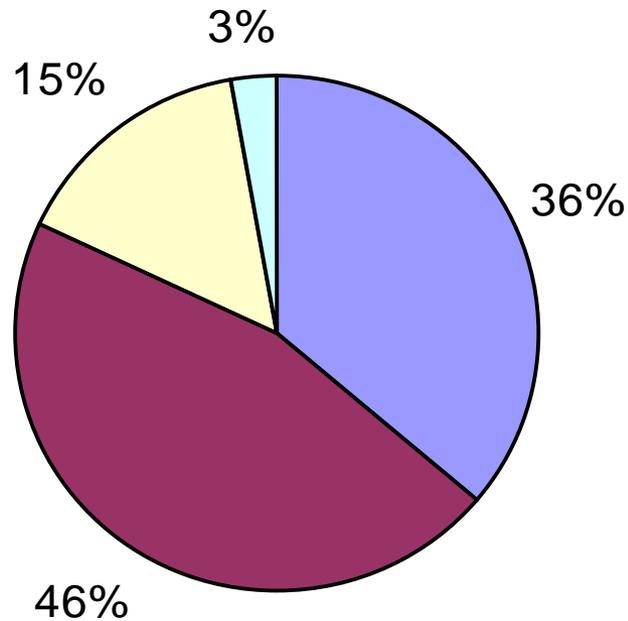


RESULTS

- The majority of the AAR/IP sample set was published between January 1, 2001 and March 1, 2008.
 - 1995 bombing of the Murrah Federal Building (Oklahoma City, OK)
 - September 11, 2001 terrorist attacks
- Sample set was geographically representative of CONUS
- Due to emphasis on pandemic preparedness in fiscal years 2006 and 2007, exercise AARs/IPs from this period are heavily focused on pandemic influenza preparedness training.



AAR/IP Categories

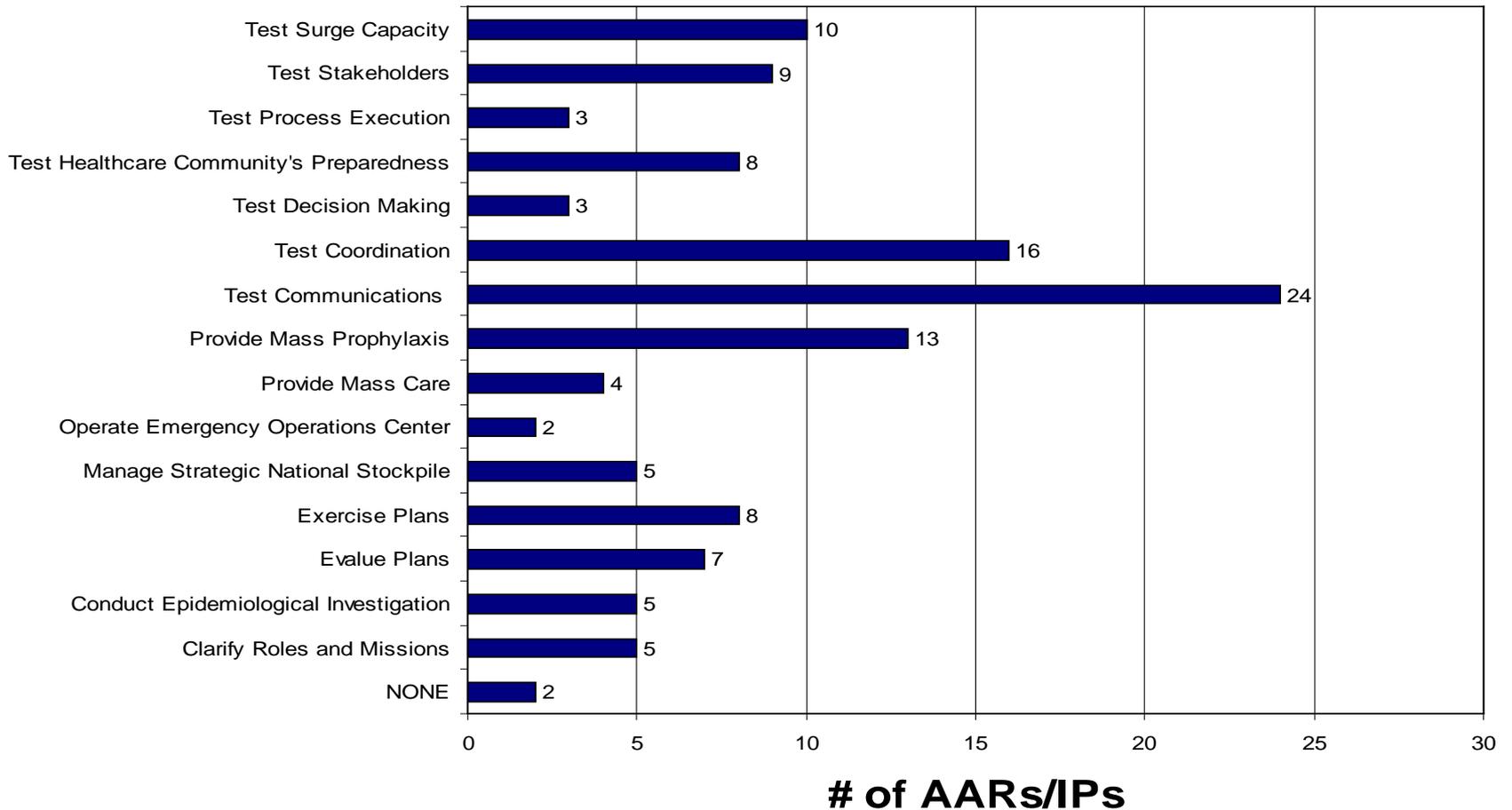


- Natural hazard scenarios
- Disease outbreak scenarios
- Terrorism/criminal activity scenarios
- Other scenarios



Frequency of Mission Objectives

Mission Objectives



**Exercises AARs: Most frequently cited observations in AARs/IPs.**

Category	Corrective Action	# of AARs/IPs	Total
Communications	Develop mechanisms to provide information to the public	18	29
Communications	Establish intra-agency communications (mechanisms)	11	
Planning	Establish policies and legal framework for social distancing and isolation	14	66
Planning	Develop continuity of operation and/or essential services criteria/ plans/ guidelines	14	
Planning	Include a broad range of stakeholders in the strategic planning process	14	
Planning	Develop scalable strategic plans and standard operating procedures (SOP) to prevent, protect against, respond to, and recover from natural and man-made disasters, as well as acts of terrorism	12	
Planning	Develop guidelines for managing needs of special populations	12	
Responder Safety and Health	Develop national, regional, and State/local level training, exercises, and/or drills for personnel/hospital staff/ population; including pre-incident training, site/ incident specific training	16	16

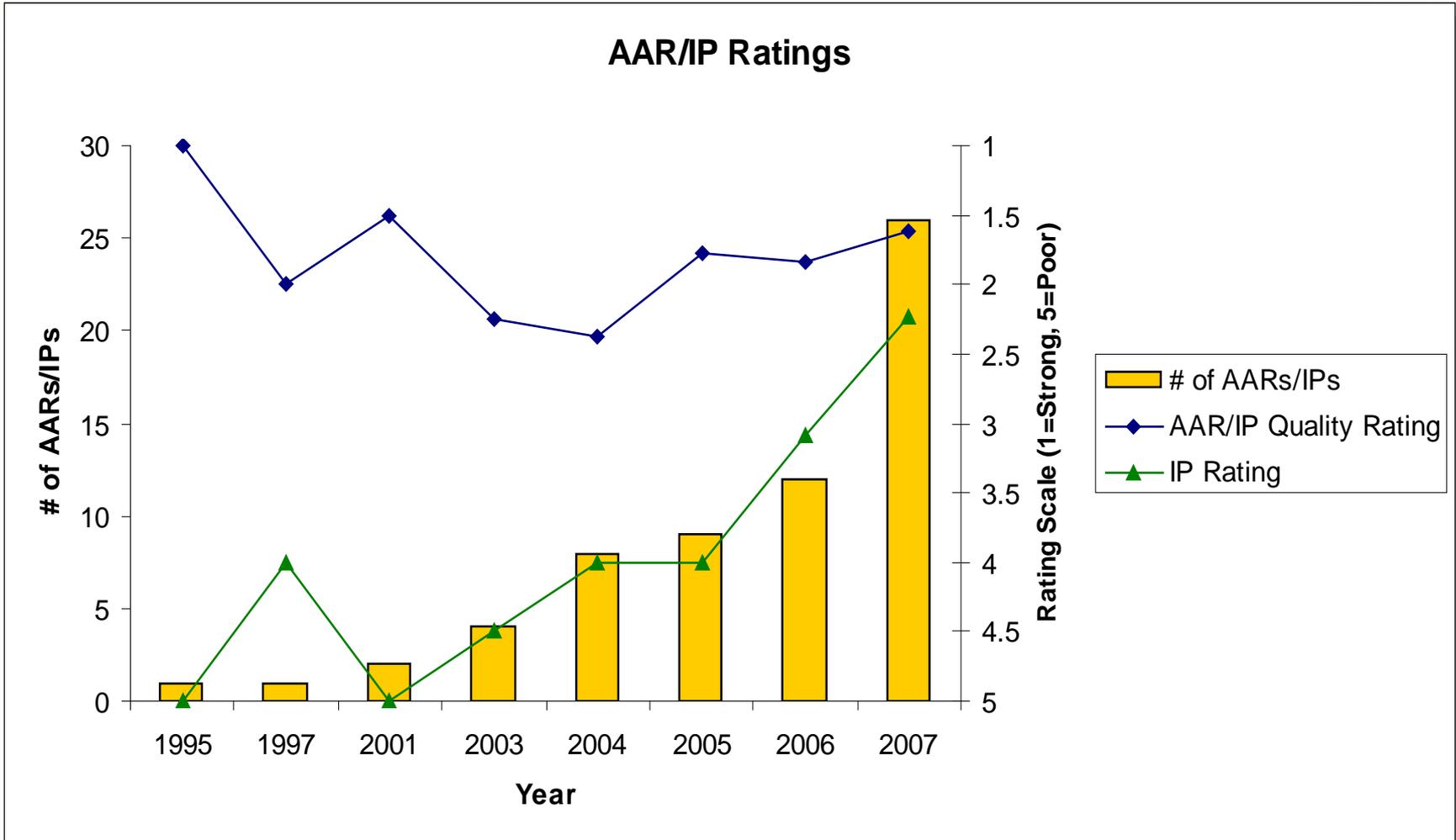


Event AARs: Most frequently cited observations in AARs/IPs.

Category	Corrective Action	# of AARs/IPs	Total
Communications	Develop and maintain interoperable communications systems to provide information within and across agencies/ organizations	9	17
Communications	Establish inter-agency communications (mechanisms)	8	
Emergency Operations Center Management	Coordinate activities between agencies/org	7	7
Planning	Develop scalable strategic plans and standard operating procedures (SOP) to prevent, protect against, respond to, and recover from natural and man-made disasters, as well as acts of terrorism	7	14
Planning	Develop coordination plans that involve all appropriate Federal, State, local, territorial, tribal, NGO, and private stakeholders	7	
Responder Safety and Health	Establish NIMS, ICS, and EOC specific training	13	23
Responder Safety and Health	Develop national, regional, and State/local level training, exercises, and/or drills for personnel/hospital staff/ population; including pre-incident training, site/ incident specific training	10	
Volunteer Management and Donations	Develop mechanisms for the coordination and management of volunteers	7	7

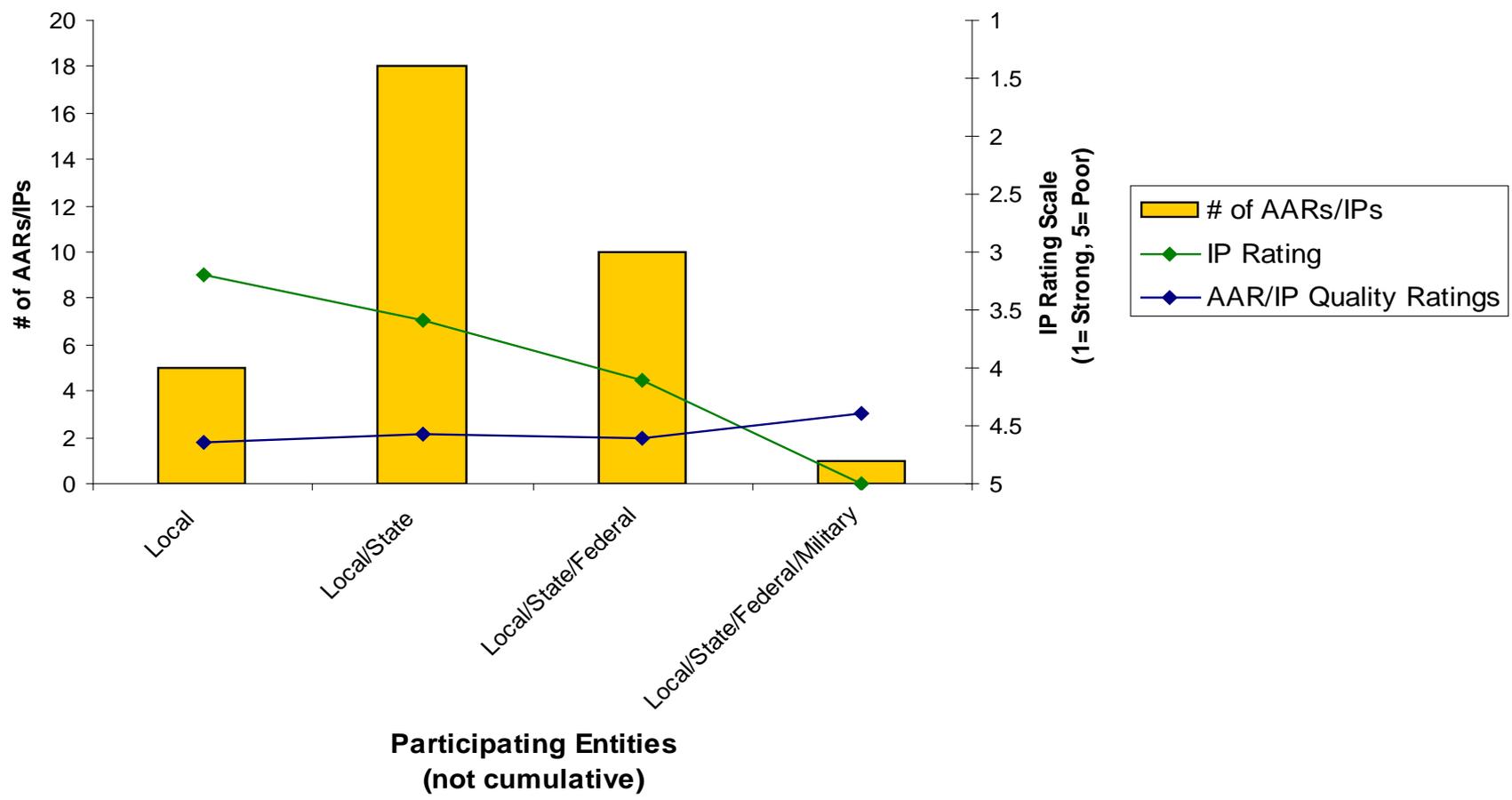


AAR/IP Ratings





AAR/IP Quality vs. Quantity of Participants





DISCUSSION

- Study demonstrates the feasibility of analyzing trends in AARs/IPs
- This proof-of-concept observed:
 - AAR Quality ratings gradually improved after 2001
 - Improvement Plan ratings of analyzed AARs/IPs decreased overall
 - Overall quantity of AARs increased over time
 - Most collaboration occurred between local and state entities
 - Increase in quality ratings after HSEEP Guidelines introduced
- Most common mission objectives:
 - Test communications
 - Test coordination
 - Provide mass prophylaxis



DISCUSSION

- Corrective actions most frequently cited:
 - Planning
 - Communications
 - Responders' Safety and Health
- Within AARs/IPs key information was not clearly or consistently recorded
- Limitations
 - Small data set
 - Missing data
 - Challenging extrapolation
 - Novelty of the methodology used



CONCLUSIONS

- Advocate setting standards for AAR/IP data collection
 - HSEEP Guidelines (2007), updated 2010
- Develop standardized mechanism for disseminating AARs/IPs, lessons learned
 - Corrective Action Program (CAPS, HSEEP component)
 - Lessons Learned Information Sharing System (LLIS)



CONCLUSIONS

- At minimum AARs/IPs should include*:
 - Executive Summary
 - Exercise Overview (includes identifying information, such as exercise name, date, duration)
 - Exercise Design Summary (includes overarching exercise purpose and goals; capabilities, activities, and tasks identified for demonstration; exercise objectives; summary of designed initiating event(s)/ key scenario events; and planned simulations)
 - Analysis of Capabilities
 - Conclusion
 - Improvement Plan
 - Acronyms
- This standardization will facilitate the observation of future trends in AARs/IPs.

*HSEEP Vol. III (2007), Appendix A, A-1



United States Department of

Health & Human Services

Office of the Assistant Secretary for Preparedness and Response (ASPR)



QUESTIONS/ COMMENTS