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Application of Strength, Weakness, Opportunity and Threat (SWOT) Analysis for the Prioritization of Community Health Program Objectives

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APPLICATION OF STRENGTH, WEAKNESS, OPPORTUNITY AND THREAT (SWOT) ANALYSIS FOR THE PRIORITIZATION OF COMMUNITY HEALTH PROGRAM OBJECTIVES

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Presenter Disclosures

Albert J Romanosky MD PhD

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

“No relationships to disclose”

The State of Public Health

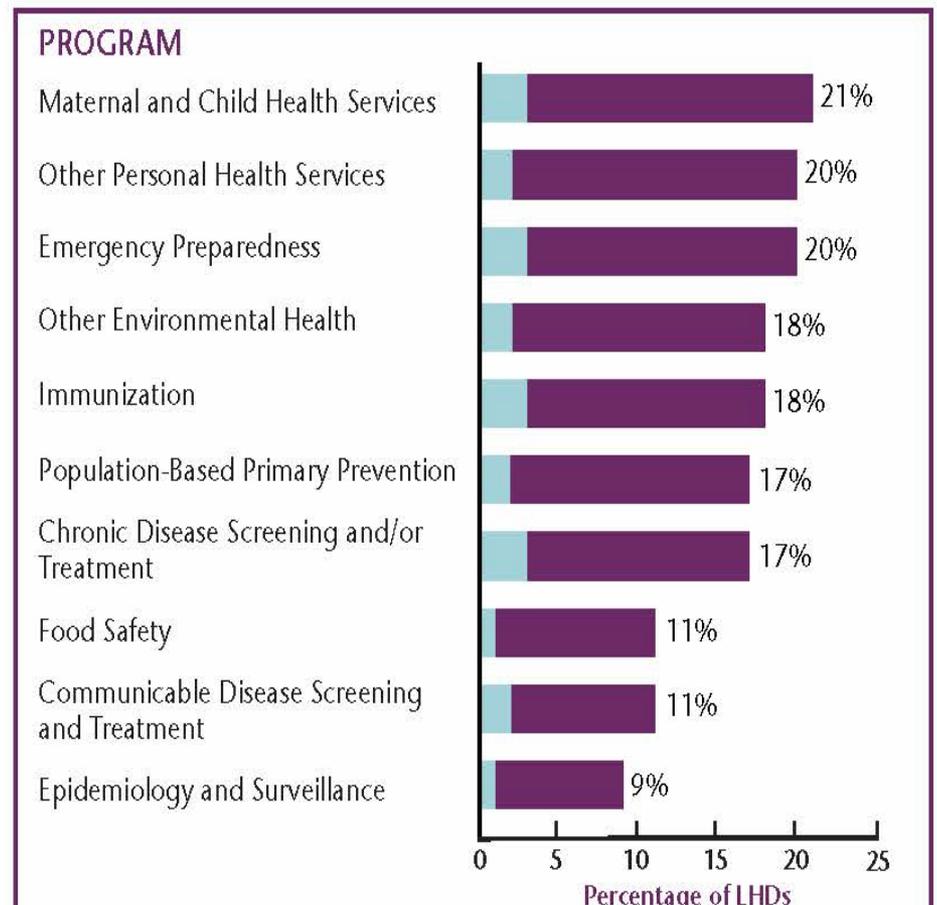
Public Health Programs

MORE THAN HALF OF ALL LOCAL HEALTH DEPARTMENTS CUT PROGRAMS

Between July 2010 and June 2011, more than half (55%) of all local health departments (LHDs) reduced or eliminated at least one program, 11 percent of which entirely eliminated at least one program. Certain programs were cut more often than others (Figure 1). Twenty-one percent of all LHDs reduced or eliminated maternal and child health services while only 9 percent made cuts to epidemiology and surveillance programs. Other personal health services and emergency preparedness programs were also among those often cut. During the prior 12-month period, 44 percent of all LHDs reduced or eliminated at least one program (not shown).

More than half (55%) of all LHDs reduced or eliminated at least one program between

FIGURE 1: Percentage of LHDs that Reduced or Eliminated Programs, Overall and by Program Area (July 2010–June 2011)



Local Health Department Job Losses and Program Cuts: Findings from July 2011 Survey; NACCHO Oct 4, 2011

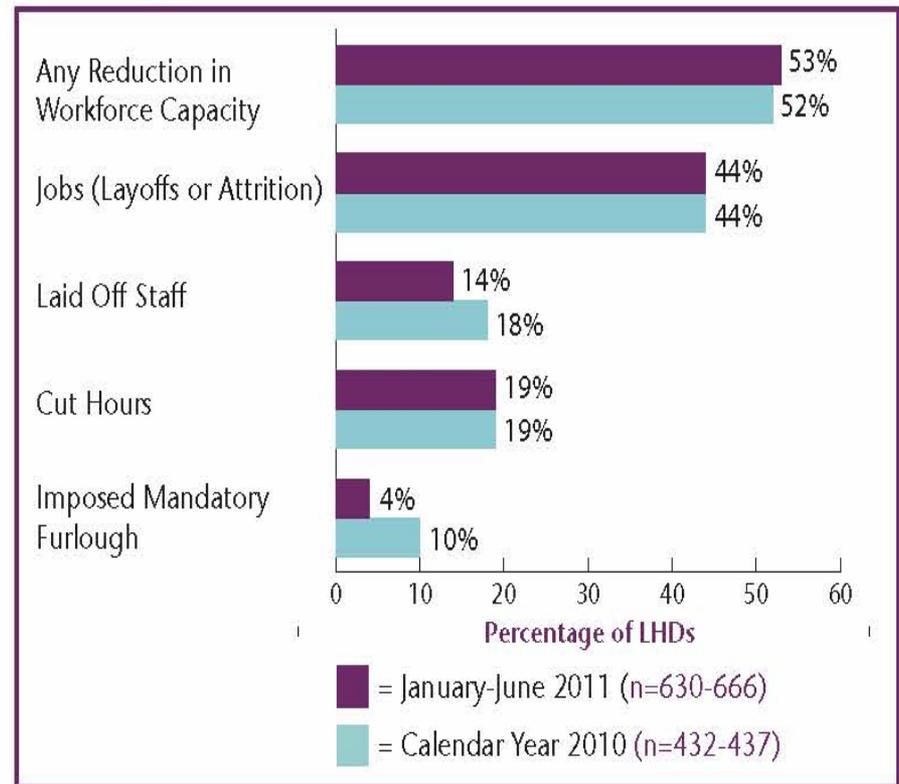
Public Health Workforce

THE NATIONWIDE WORKFORCE CONTINUES TO SHRINK

During the first half of 2011, more than four out of every 10 (44%) LHDs lost at least one employee (Figure 2) as they collectively shed 5,400 jobs (Figure 3). When reduced hours and mandatory furlough are also considered, the percentage of LHDs experiencing some type of negative job impact increases to 53 percent, nearly equal to the percentage of LHDs reporting negative job impact during 2010. Since 2008, LHDs lost a total of 34,400 jobs to layoffs and attrition.

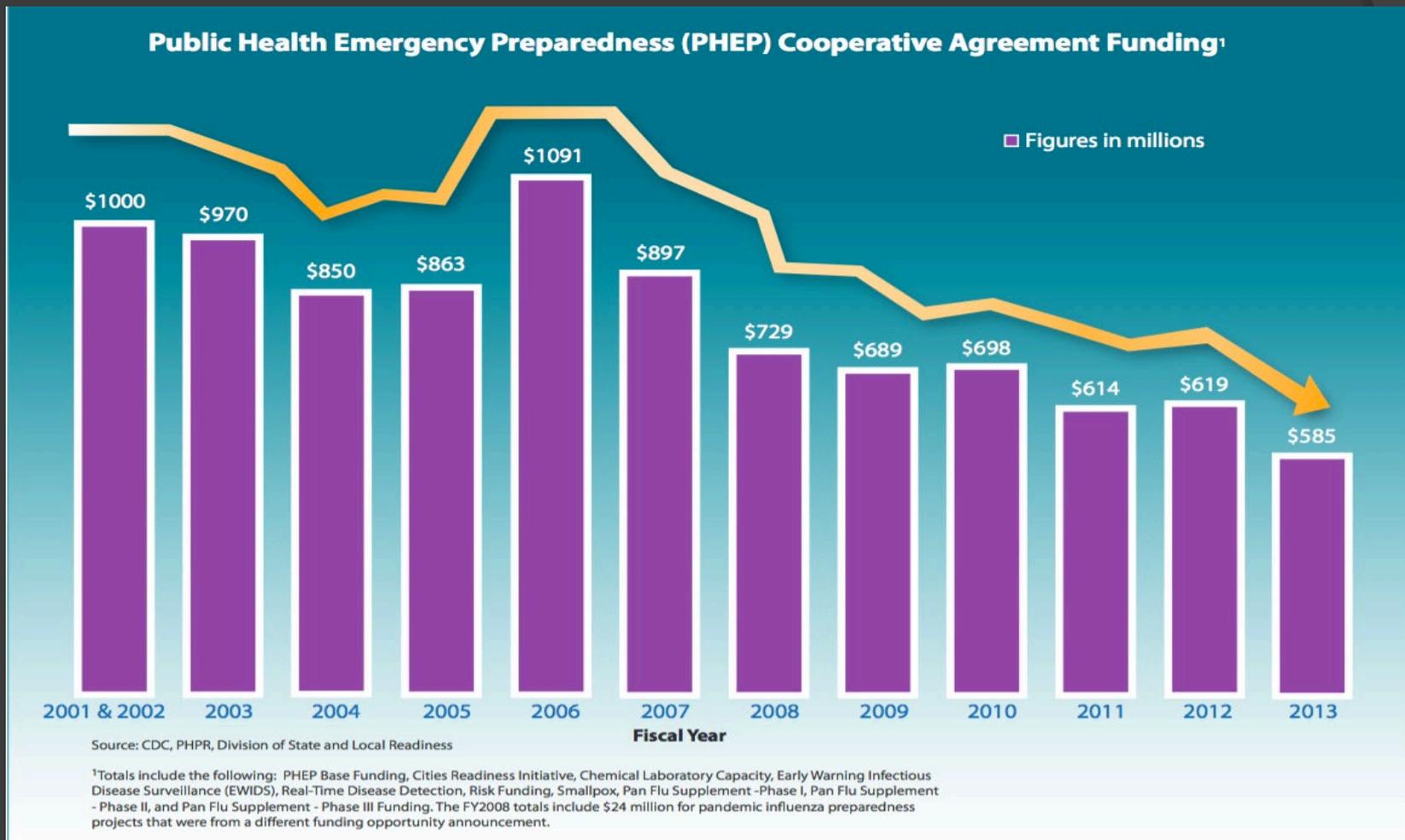
Workforce additions were small by comparison (Figure 3). Between January and June 2011, 19 percent of LHDs reported staff additions (not shown). In total, LHDs added 1,800 staff positions, 1,400 new positions and 400 previously frozen positions.

FIGURE 2: Percentage of LHDs Losing Workforce Capacity in 2010, Overall and by Type (Calendar Year 2010 and January–June 2011)



Local Health Department Job Losses and Program Cuts: Findings from July 2011 Survey; NACCHO Oct 4, 2011

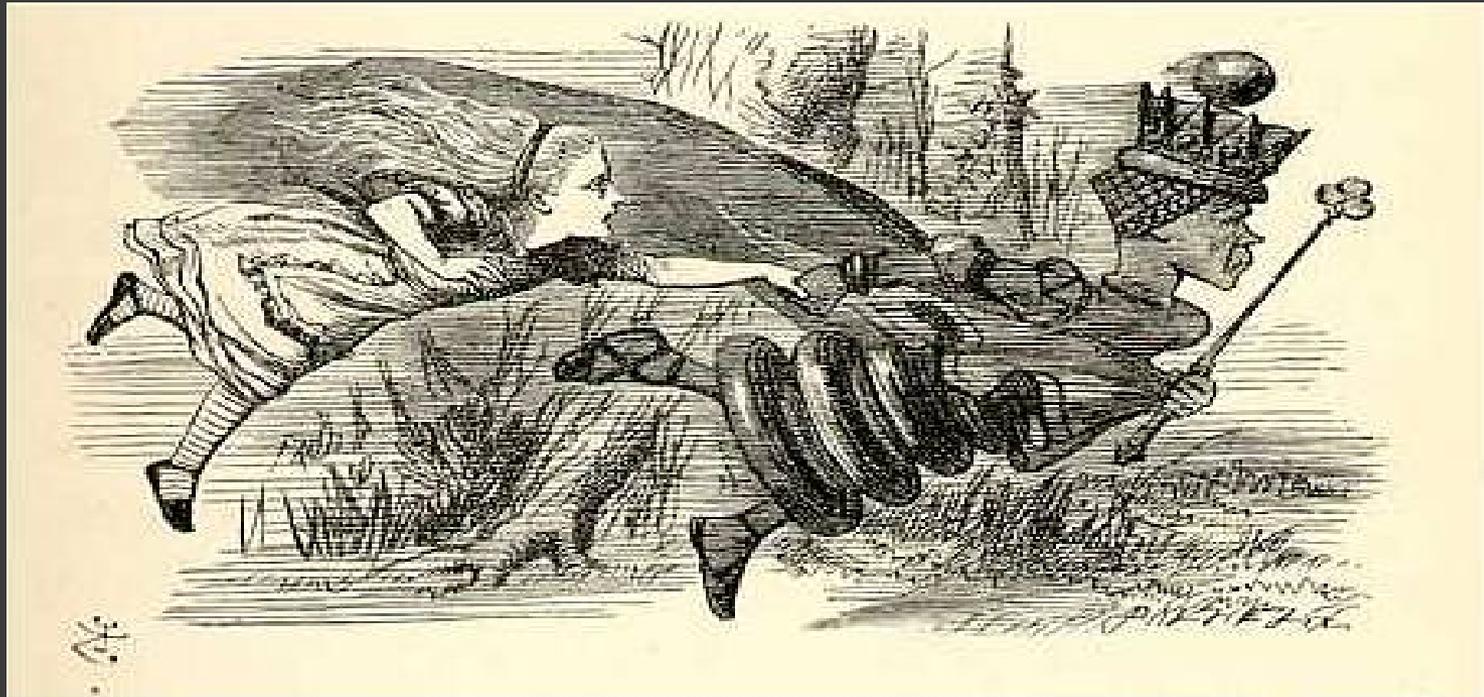
The Public Health Emergency and Disaster Preparedness Funding



Ebola in the U.S.—Politics and Public Health Don't Mix; By [Judy Stone](#) Scientific American
October 6, 2014

The Red Queen Theorem of Public Health

"Well, in our country," said Alice, still panting a little, "you'd generally get to somewhere else -- if you run very fast for a long time, as we've been doing."



**"A slow sort of country!" said the Queen.
"Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"**

Public Health Disaster and Emergency Preparedness

Office of Preparedness and Response

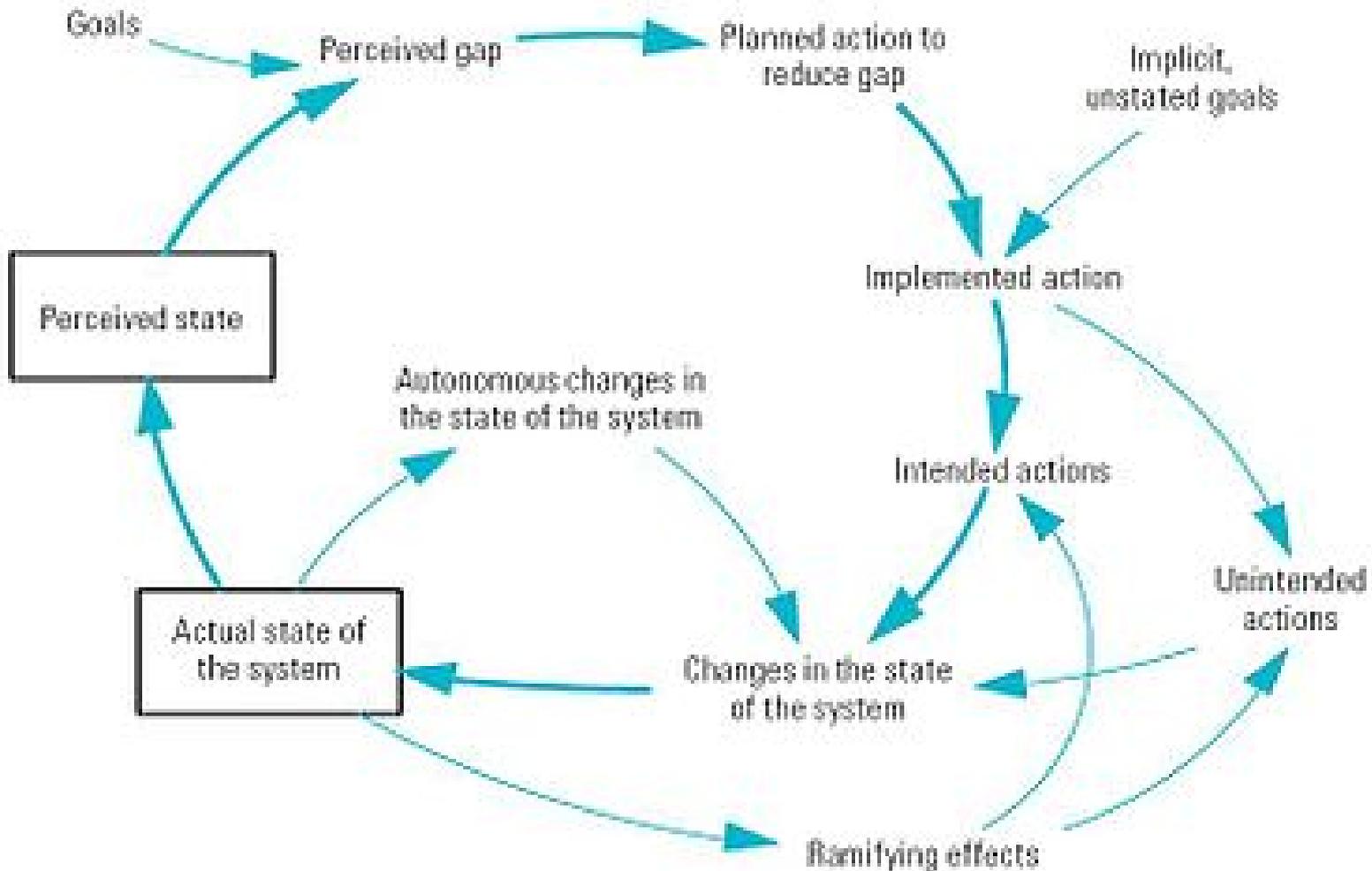
What We Do:

Develop disaster and emergency preparedness capabilities within public health and medical community, stakeholders and partners in support of program goals and objectives

What Public Health Does



Program Assessment and Improvement



Public Health Disaster and Emergency Preparedness Program Objectives and Capabilities

- ⦿ Incident Management
 - Emergency Operations Coordination
 - Incident Command System (ICS) / Unified Command
- ⦿ Resource Management
 - Medical Materiel Management and Distribution
- ⦿ Planning
- ⦿ Information Management
 - Information Sharing
 - Situational Awareness

Public Health Disaster and Emergency Preparedness Program Assessment

- ◎ Functional and operational assessment
 - Drills:
 - limited operational and functional testing
 - Exercises:
 - Table Top Exercises / Facilitated Discussions
 - Full scale functional exercise with all stakeholders and partners

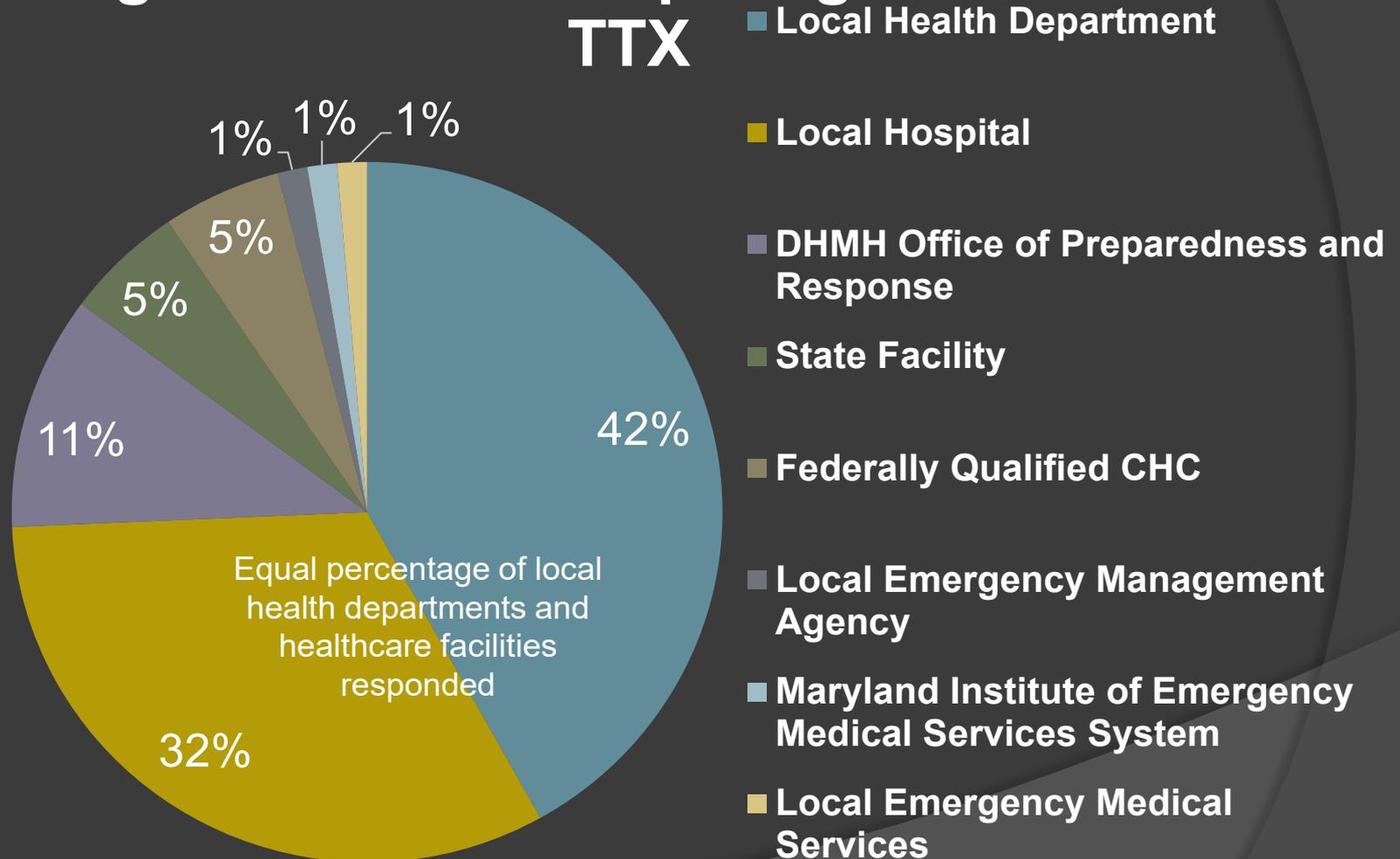
The Best Data Sources Required

Disaster and Emergency Preparedness Program Data

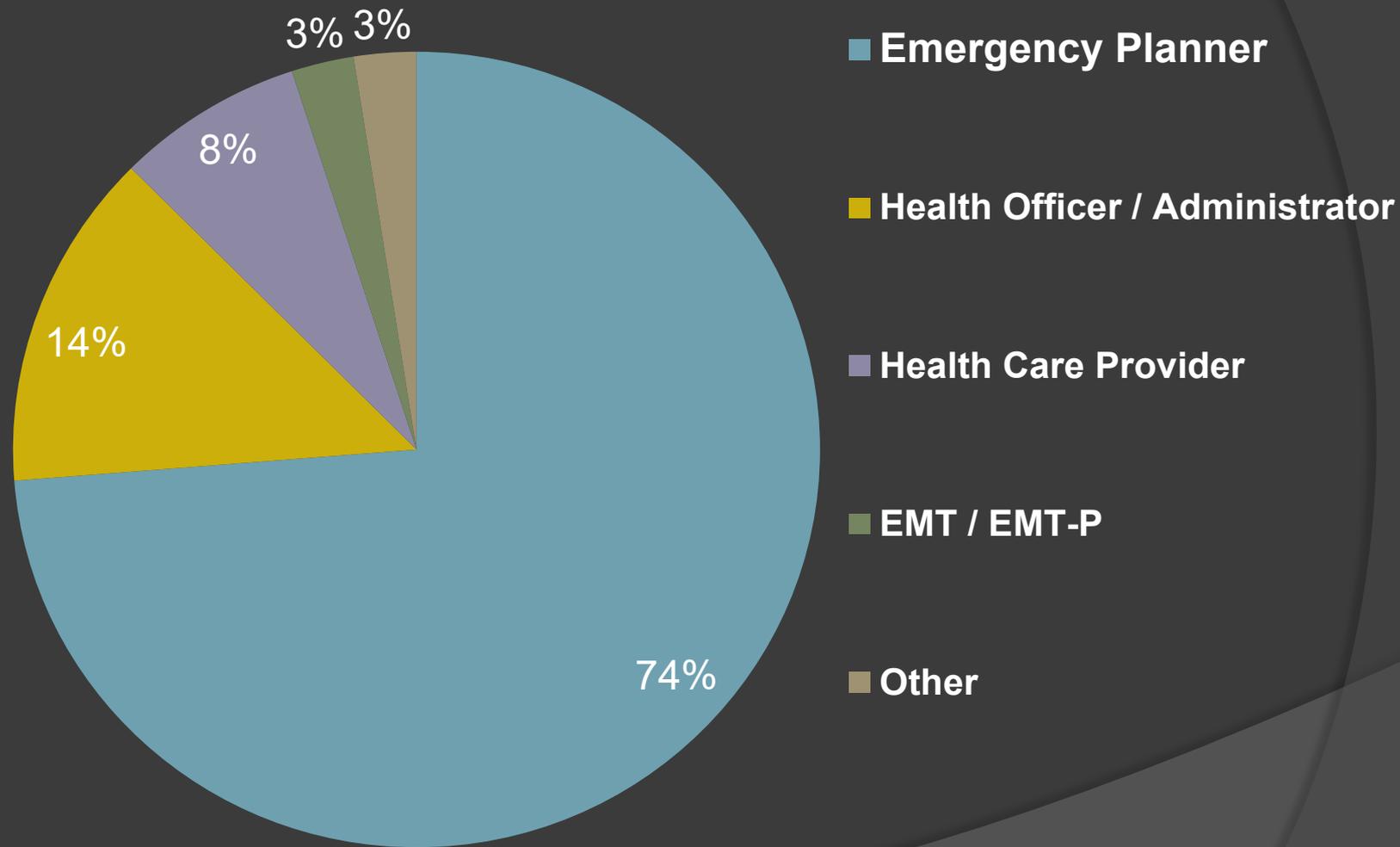
Stakeholder, partner and interested party
input through functional evaluations,
discussions and surveys

Must have the correct individuals
commenting on programs

Percentage of Partners, Stakeholders and Interested Individuals by Organization Participating in an Ebola TTX



Partner and Stakeholder Roles Within Their Respective Organizations



SWOT Analysis and Data Coding

SWOT Analysis

- ⦿ Efficient, methodical and systematic
- ⦿ Identify favorable and unfavorable factors
 - ⦿ Identify and prioritize solutions
 - ⦿ Operational plan improvements
 - ⦿ Achieve desired objectives

SWOT Analysis

“S”trengths:	<ul style="list-style-type: none">• <i>A listing or notation of the strengths of the system.</i>• <i>Attributes of the emergency plan or organization that are helpful to achieving the objective.</i>
“W”eaknesses:	<ul style="list-style-type: none">• <i>What weaknesses in the system have been identified?</i>• <i>Attributes of the emergency plan or organization that are harmful to achieving the objective.</i>
“O”pportunities :	<ul style="list-style-type: none">• <i>What opportunities exist to help achieve the strategic plan and goals?</i>• <i>Conditions that are helpful to achieving the objective.</i>
“T”hreats:	<ul style="list-style-type: none">• <i>What threats exist to prevent achievement of the stated goals?</i>• <i>Conditions that are harmful to achieving the objective.</i>

SWOT Analysis

- How can we Use each Strength to do better?
- How can we Stop, Improve, Avoid or Build upon each Weakness?
- How can we Exploit each Opportunity?
- How can we Defend against each Threat?

Matching and Converting and Minimize and Avoid

Comment and Program Assessment Data Coding

Exercise Node	SWOT	Capability Domain	Capability	Functional Area		Comments and Findings
DOC	Opportunities:	CM	LOG	OPS	Plans	Develop system to see truck shipments in realtime here in DOC
DOC	Strengths:	CM	LOG	OPS	Functional	Adaptability of NEMF- Transportation company was able to overcome challenges from yesterday to make deliveries in one day
DOC	Threats:	CM	LOG	OPS	Plans	Need to improve visibility on the trucks and where they were when (logistical awareness)
DOC	Threats:	CM	LOG	OPS	Tracking	OP&R needs better visibility on trucks
DOC	Weaknesses:	CM	LOG	OPS	Tracking	Plans need to augment tracking of medical materiel after shipment has left RSS
DOC	Strengths:	CM	MM	OPS	Functional	Issue at RSS inventory management system was handled well and quickly
DOC	Opportunities:	IcM	CC	ICS	email	Increased usage of the ICS email addresses
DOC	Opportunities:	IcM	CC	ICS	Plans	Consider in the future changing our email addresses and voicemails to refer exercise or real world response related questions to the DOC contacts
DOC	Opportunities:	IcM	CC	ICS	Plans	Include an activation list of all active DOC emails and phone numbers
DOC	Opportunities:	IcM	CC	OPS	Finance	Provide opportunity to initiate emergency procurement process (e.g. credit card activation)

Program Assessment Step 1: Develop a Program Narrative

Incident Management

Department Operations Center Operational Analysis

Strengths:

Institution of ICS for Command and Control was established early without delay and was effective by demonstrating adaptability to changing needs and requirements both within the DOC as well as the RSS. This was accomplished through the knowledgeable and dedicated staff as well as adoption of NIMS ICS processes and protocol. In addition Emergency Operations Coordination between the DOC and RSS was enhanced through the coordinated development of Battle Rhythms and Incident Action Plans on day two. Importantly, the use of cross-cutting teamwork in day to day operations facilitated and provided a foundation for integrated team work. Lastly, support by DHMH Senior Executives resulted in enhanced DOC operational capability.

Incident Management

Department Operations Center Operational Analysis

Weaknesses:

There is a need for greater cross training of staff for better depth and organization such as SOPs for all ICS positions. In terms of Emergency Operations Coordination, WebEOC table views of activities were limited and did not show enough information. Staff information and DOC operation forms need to be updated frequently. IT and PIO staff were limited during DOC operations.

Incident Management

Department Operations Center Operational Analysis

Opportunities:

ICS needs depth to be able to expand to Branch level operations when required with integrated and coordinated battle rhythms developed early in establishment of ICS activities. A critical operational opportunity is the development of departmental COOP planning in support of DOC operations in light of increasing absenteeism of DHMH staff. DOC ICS staff need better visibility on who is assigned to which position as well as which DOC email accounts are in use. Lastly, there is opportunity to develop and document an emergency and expedited procurement protocol / SOP.

Incident Management

Department Operations Center Operational Analysis

Threats:

ICS within the DOC is under threat from the lack of sufficient number of staff to assume duties especially for prolonged operations. In addition, there was failure to establish "performance goals" to recognize essential activities that were not achieved within a predetermined established time frame, thus, resulting in failure to implement timely corrective operational responses. An additional threat to DOC ICS operations was the expectation that some staff assigned to ICS positions were expected to also be responsible for their day to day duties, thereby, impacting their emergency operations performance.

Emergency Operations Coordination was limited by difficulty in managing ICS within two separate locations (DOC and RSS) as a result of the limited planning for such operations.

**Program Assessment Step 2:
Determine the Frequency of SWOT
Comments for Each Objective**

Data Analysis: Strengths, Weaknesses, Opportunities and Threat (SWOT) Paradigm

- ⦿ Comments and discussion points were tabulated
- ⦿ Topics were identified by capability
- ⦿ Capabilities were then assigned to a SWOT category
- ⦿ The frequency capabilities were mentioned within each SWOT category were determined

Frequency Objectives Were Cited

Objectives	Frequency Cited
Incident Management	19%
Resource Management	19%
Planning	18%
Information Management	17%
Exercise and Training	7%

Frequency Objectives Were Cited As Strengths By Jurisdiction

Strengths	Maryland	Region 1&2	Region 3	Region 4	Region 5
Incident Management	31%	35%	26%	30%	33%
Information Management	23%	40%	32%	13%	7%
Planning	22%	15%	11%	20%	47%
Resource Management	10%	5%	21%	7%	7%
Public Health Surveillance and Epidemiological Investigation	4%		5%	7%	
Countermeasures	2%			7%	
Mass Care	2%			7%	
Responder Safety and Health	2%			3%	7%
Community Recovery	1%	5%			
Exercise / Training	1%		5%		

Frequency Objectives Were Cited As Weaknesses By Jurisdiction

Weaknesses	Maryland	Region 1&2	Region 3	Region 4	Region 5
Planning	20%	8%	20%	18%	39%
Resource Management	20%	23%	20%	29%	6%
Incident Management	16%	23%		12%	22%
Exercise / Training	14%	19%	27%	6%	6%
Information Management	12%	8%	20%	12%	11%
Fatality Management	7%	4%	13%	6%	6%
Responder Safety and Health	4%			6%	11%
Public Health Surveillance and Epidemiological Investigation	3%			6%	
Volunteer Management	3%	4%		6%	
Mass Care	1%	4%			
Medical Surge	1%	4%			
Community Recovery					
Countermeasures					
Legal		4%			

Frequency Objectives Were Cited As Opportunities By Jurisdiction

Opportunities	Maryland	Region 1&2	Region 3	Region 4	Region 5
Incident Management	25%	19%	24%	42%	14%
Information Management	19%	24%	12%	33%	
Planning	19%	10%	18%	17%	57%
Resource Management	18%	24%	24%		14%
Exercise / Training	11%	19%	6%	8%	
Public Health Surveillance and Epidemiological Investigation	5%		12%		14%
Fatality Management	2%		6%		
Responder Safety and Health	2%	5%			

Frequency Objectives Were Cited As Threats By Jurisdiction

Threats	Maryland	Region 1&2	Region 3	Region 4	Region 5
Resource Management	29%	35%	24%	26%	36%
Information Management	14%	20%	12%	15%	7%
Planning	13%	15%	12%	4%	29%
Community Preparedness	8%	5%	12%	4%	14%
Public Health Surveillance and Epidemiological Investigation	8%	5%	6%	15%	
Incident Management	6%	5%	6%	4%	14%
Responder Safety and Health	6%	5%	12%	7%	
Mass Care	5%		6%	11%	
Exercise / Training	4%	5%	6%	4%	
Fatality Management	4%		6%	7%	
Volunteer Management	3%	5%		4%	

Statewide Objectives and Relationships Across SWOT Categories by Frequency of Discussion Within Each SWOT Category

Strengths	Weaknesses	Opportunities	Threats
Incident Management 31%	Planning 20%	Incident Management 25%	Resource Management 29%
Information Management 23%	Resource Management 20%	Information Management 19%	Information Management 14%
Planning 22%	Incident Management 16%	Planning 19%	Planning 13%
Resource Management 10%	Exercise / Training 14%	Resource Management 18%	Public Health Surveillance and Epidemiological Investigation
Public Health Surveillance and Epidemiological Investigation	Information Management 12%	Exercise / Training 11%	Community Preparedness
Countermeasures	Fatality Management	Public Health Surveillance and Epidemiological Investigation	Incident Management 6%
Mass Care	Responder Safety and Health	Fatality Management	Responder Safety and Health
Responder Safety and Health	Public Health Surveillance and Epidemiological Investigation	Responder Safety and Health	Mass Care
Community Recovery	Volunteer Management		Fatality Management
Exercise / Training 1%	Mass Care		Exercise / Training 4%
Fatality Management	Medical Surge		Volunteer Management
Volunteer Management	Community Recovery		

**Data Analysis Step 3:
Is There a Better Way to Assess
Program Value and Effectiveness?**

Objective Differential

Determine the balance between competencies and deficiencies / gaps for each program or objective

Competency / Value = Strengths + Opportunities

Versus

Deficiency / Ineffectiveness = Weaknesses +
Threats

Program or Objective Competency, Value and Gap Determinations

$$\text{Objective Differential} = \frac{(C_S * A) + (C_W * B) + (C_O * C) + (C_T * D)}{\text{Total Number of SWOT Observations}}$$

- C_S = objective counted as a strength
- C_W = objective counted as a weakness
- C_O = objective counted as a opportunity
- C_T = objective counted as a threat

- A, B, C and D are correction factors for the weighted value assigned to each SWOT category.

Program or Objective Competency, Value and Gap Determinations

$$\text{Objective Differential} = (C_S * A) + (C_W * B) + (C_O * C) + (C_T * D) / \text{Total Number of SWOT Observations}$$

Weighted Values		
A	Strength	3
B	Weakness	-3
C	Opportunity	1
D	Threat	-5

Program or Objective Competency, Value and Gap Determinations

$$\text{Objective Differential} = \frac{(C_S * A) + (C_W * B) + (C_O * C) + (C_T * D)}{\text{Total Number of SWOT Observations}}$$

Positive Values = objective effectiveness
or program competency

Negative Values = objective failure,
deficiency or gap

Relative Preparedness Gap Assessment for Each Preparedness Objective Relative to Strengths and Opportunities versus Weaknesses and Threats by Maryland Sub-state Jurisdictions

Preparedness Objectives	Maryland	Region 1&2	Region 3	Region 4	Region 5
Resource Management	-43%	-52%	-19%	-51%	-44%
Exercise and Training	-13%	-15%	-19%	-8%	-6%
Community Preparedness	-10%	-6%	-15%	-6%	-19%
Planning	-10%	-11%	-15%	7%	-30%
Responder Safety and Health	-9%	-5%	-15%	-12%	-6%
Fatality Management	-9%	-3%	-15%	-12%	-6%
Public Health Surveillance and Epidemiological Investigation	-8%	-9%	0%	-20%	2%
Mass Care	-6%	-3%	-7%	-10%	0%
Information Management	-5%	3%	1%	-12%	-15%
Volunteer Management	-4%	-9%	0%	-6%	0%
Medical Surge	-1%	-3%	0%	0%	0%
Community Recovery	1%	0%	0%	0%	0%
Countermeasures	2%	0%	0%	7%	0%
Incident Management	11%	2%	21%	24%	-11%

Summary

- SWOT Analysis provides three mechanisms for assessment of public health program goals and objectives:
 - Development of a Program Narrative
 - Identification of the respective strengths, weaknesses, opportunities and threats for the program;
 - Determination of the relative importance and value of Program objectives to stakeholders, partners and interested parties;
 - Frequency objectives were mentioned within SWOT categories
 - Quantitative Determination of Program competencies and gaps
- SWOT Analysis permits program assessment and comparison across implementing jurisdictions

QUESTIONS

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