

# The 10<sup>th</sup> Global Health Supply Chain Summit



**Developing a Framework for Building Supply Chain Resilience:  
Building on Lessons Learned from West African Ebola Crisis**

**November 15-17, 2017  
Accra, Ghana**



## Objectives and Panelists

- To discuss and provide guidance leading to the development of a framework for building resilient supply chain systems in Africa.
- Hear case studies from Guinea, Liberia, and Sierra Leone to guide the discussion on challenges and solutions.
- **Guinea:** Dr. Nagnouma Sano, Chef Section Etablissements Pharmaceutiques Point Focal Securisation des produits de la Sante, Ministere Sante
- **Liberia:** Mr. Tolbert Nyenswah, Deputy Minister of Health
- **Sierra Leone:** Ms. Jatu Abdulai, Senior Pharmacist at the MOH Directorate of Drugs and Medical Supplies (DDMS)



# What is Resilience?

- Resilience is the capacity of any entity – an individual, a community, an organization, or a natural system – **to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience.**
- **A resilient supply chain is fundamental to delivering core products and services over long periods in times of stress.**
- A resilient system is much more than natural disaster management or epidemic management. It requires an understanding of **where the system is weak and how we might strengthen it; it is about the ability to not just bounce back but to bounce forward.**



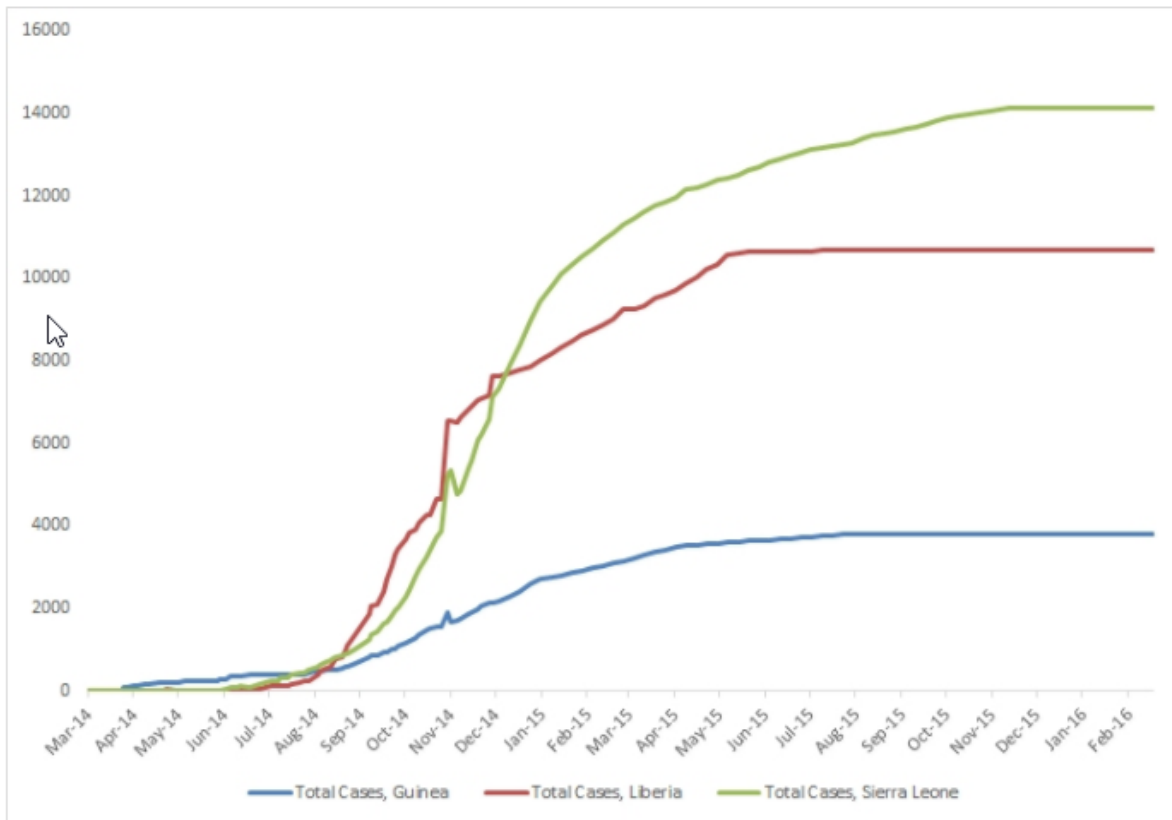
# Why Build a Resilient Supply Chain?

- “WHO went into battle against this virus with no army of reinforcements to support a sustained response, no war chest to fund a surge, and weapons that date back to the Middle Ages.”
- At least **22 African countries** have the ecological conditions and social behaviors that put them at risk of future outbreaks of Ebola
- **Ebola has a mortality rate of around 60–70 per cent**, but early treatment has proved a critical factor
- There is a relatively low level of awareness and preparedness for supply chain impacts and not much systematic effort to increase resilience
- There is a need to **disrupt chains of transmission** while **maintaining supply chains of core goods and services** and **creating new supply chains of vaccines, protection equipment, epidemiologists and medically trained staff**. All three are supply chain issues. The challenge is to manage all three simultaneously.



# Confirmed cases of Ebola in Guinea, Liberia and Sierra Leone

Graph 1: Total suspected, probable, and confirmed cases of Ebola virus disease in Guinea, Liberia, and Sierra Leone, March 25, 2014 – February 14, 2016, by date of WHO Situation Report, n=28603



Graph 1 shows the total reported suspected, probable, and confirmed cases in Guinea, Liberia, and Sierra Leone provided in [WHO situation reports](#) beginning on March 25, 2014 through the most recent situation report on February 17, 2016.

[Reported suspected, probable, and confirmed cases in Guinea, Liberia, and Sierra Leone](#) [CSV - 1 page]



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# Ebola Deaths in Guinea, Liberia and Sierra Leone

## Ebola deaths

Figures up to 13 January 2016

# 11,315

Deaths - probable, confirmed and suspected

(Includes one in the US and six in Mali)

**4,809** Liberia

**3,955** Sierra Leone

**2,536** Guinea

**8** Nigeria

Source: WHO



Getty

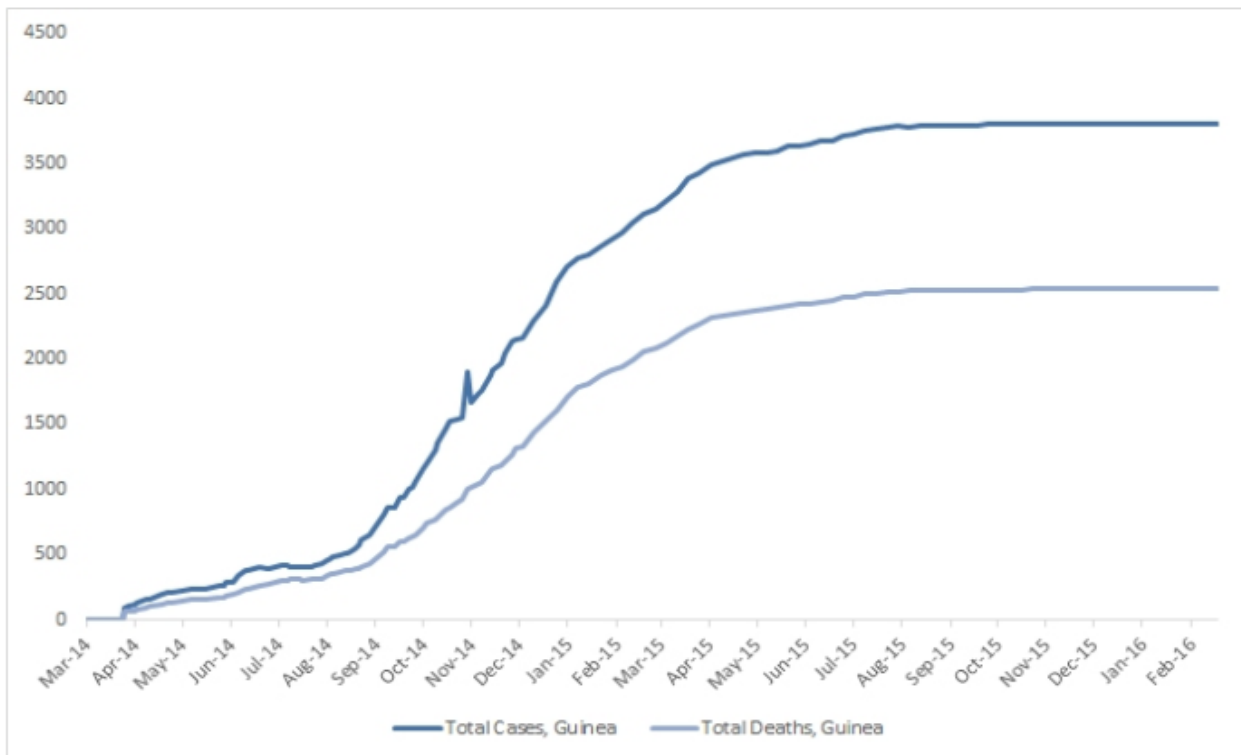




# Guinea



Graph 2: Total suspected, probable, and confirmed cases and deaths of Ebola virus disease in Guinea, March 25, 2014 – February 14, 2016 by date of WHO Situation Report, n=3804



Graph 2 shows the total reported suspected, probable, and confirmed cases and deaths in Guinea provided in [WHO situation reports](#) beginning on March 25, 2014 through the most recent situation report on February 17, 2016.

[Reported suspected, probable, and confirmed cases and deaths in Guinea](#) [CSV - 1 page]



# Guinea

- The country **gave the world the wake-up call about the disease**, "patient zero" the first human to get Ebola, was from Guinea (December 2013)
- Lessons learned from the Ebola outbreak in Guinea emphasize the value of a **strong local and tailored response to outbreaks**.
- Lessons include **trained local responders, adequately staffed personnel at village health facilities, and a well-informed and engaged community**.





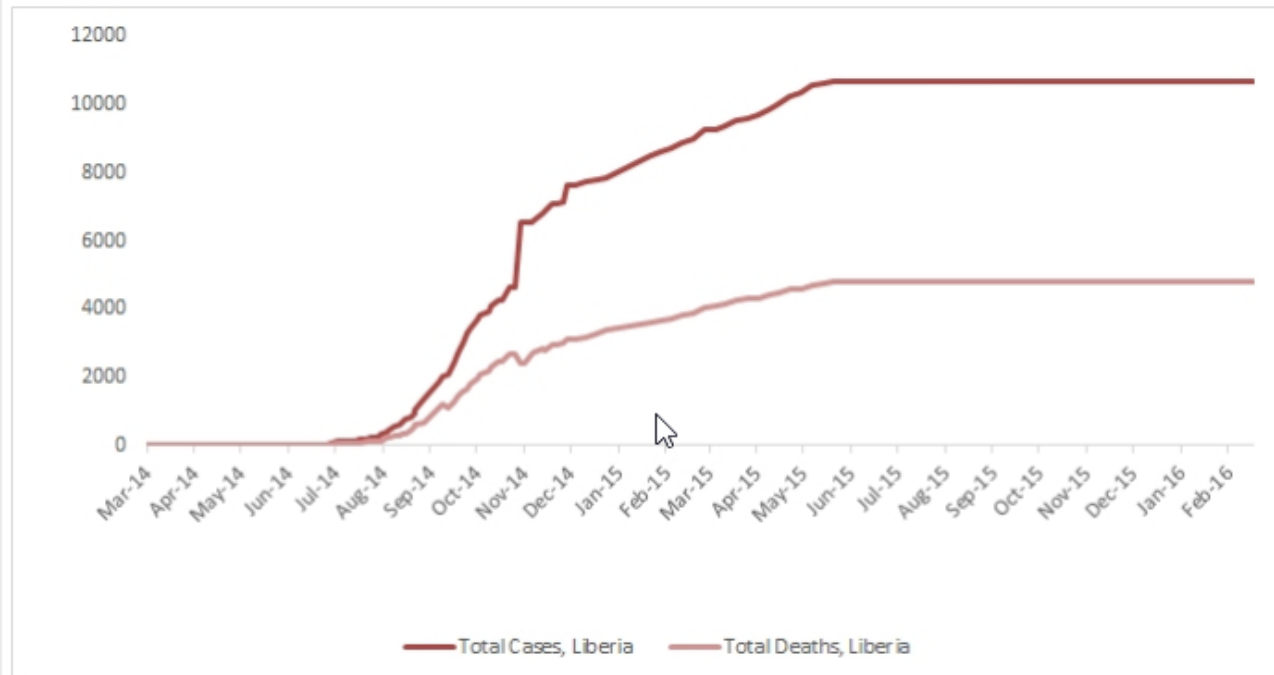
## Questions for Guinea

- Describe your country's supply chain during the Ebola outbreak.
- What were your main challenges to maintaining a functioning supply chain during the Ebola outbreak? What were your challenges with human resources?
- What are your lessons learned from the Ebola outbreak?
- What does resilience mean to you and how would you build a resilient supply chain? What are possible solutions?
- What are your specific recommendations for central governments, local governments, businesses and NGOs?

# Liberia



Graph 3: Total suspected, probable, and confirmed cases and deaths of Ebola virus disease in Liberia, March 25, 2014 – February 14, 2016, by date of WHO Situation Report, n=10675



Graph 3 shows the total reported suspected, probable, and confirmed cases and deaths in Liberia provided in [WHO situation reports](#) beginning on March 25, 2014 through the most recent situation report on February 17, 2016.

[Reported suspected, probable, and confirmed cases and deaths in Liberia](#) [CSV - 1 page]



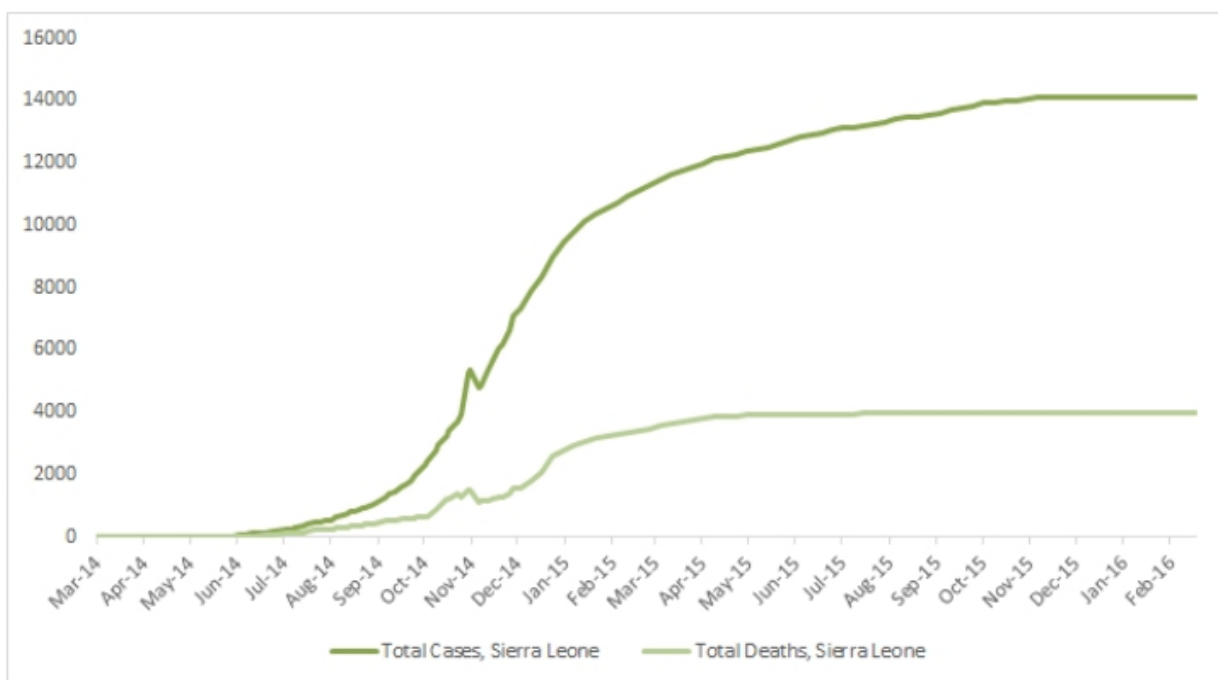
## Questions for Liberia

- Describe your country's supply chain during the Ebola outbreak.
- What were your main challenges to maintaining a functioning supply chain during the Ebola outbreak? What were your challenges with human resources?
- What are your lessons learned from the Ebola outbreak?
- What does resilience mean to you and how would you build a resilient supply chain? What are possible solutions?
- What are your specific recommendations for central governments, local governments, businesses and NGOs?

# Sierra Leone



Graph 4: Total suspected, probable, and confirmed cases and deaths of Ebola virus disease in Sierra Leone, March 25, 2014 – February 14, 2016, by date of WHO Situation Report, n=14124



Graph 4 shows the total reported suspected, probable, and confirmed cases and deaths in Sierra Leone provided in [WHO situation reports](#) beginning on March 25, 2014 through the most recent situation report on February 17, 2016.

[Reported suspected, probable, and confirmed cases and deaths in Sierra Leone](#) [CSV - 1 page]



## Describe your country's supply chain during the Ebola outbreak - Sierra Leone

- Availability- Adhoc Quantification - Rationing Concept
- Poor Quality Data Management and Systems - show blue print at any one time
- Procurement Challenges (Finances, Processes, Long Lead Times, Pipeline Inadequacies)
- Fit for Purpose Storage - Visibility and Inventory Control Management, Limited Space
- Distribution Irregularities/ Transport Systems
- Lots of Players
- Donations



## **What were your main challenges to maintaining a functioning supply chain during the Ebola outbreak? What were your challenges with human resources? – Sierra Leone**

- Inadequate Supplies
- Quality Assurance of Products
- Distribution Channels
- Uncoordinated supplies
- Use of alternate systems, not existing ones - Total Bypass/  
Lack of appreciation for local expertise
- Too many Players
  
- Personnel-Willingness, Commitment, Weak disease  
Knowledge and Preventative Measures, Thin on ground.





## What are your lessons learned from the Ebola outbreak? – Sierra Leone

- Response of the National Health system (cohesion, infrastructure, cultural, religious)
- Good Inventory management systems
- Storage facility inadequacies
- Strengthening local leadership
- Buffer stock management - Quantification
- Unified front= Avoiding wastage of resources
- Building the capacity of human resources



## **What does resilience mean to you and how would you build a resilient supply chain? What are possible solutions? – Sierra Leone**

- A system that prepares for and responds to crisis
- That can maintain existing functions and services with minimum interruptions
- Learn from lessons
- Be able to bounce back fast from crisis
- Be optimal at both good and bad times
- Resilient with data improvement
- Reform, Policies, Government ownership, infrastructure investment, Processes improvement (Quantification, Procurement, LMIS, Storage, Distribution capacity), human resource capacity building



# What are your specific recommendations for central governments, local governments, businesses and NGOs?

## **Local Governments - Strengthening Local Leadership**

- Managing the Cultural Influence- Healers
- Keeping confidence for Health Centres
- Reconstruction

## **Central Government - Supply Chain Reform**

- Managing Donations / Policies
- Communication
- Accountability, Systems

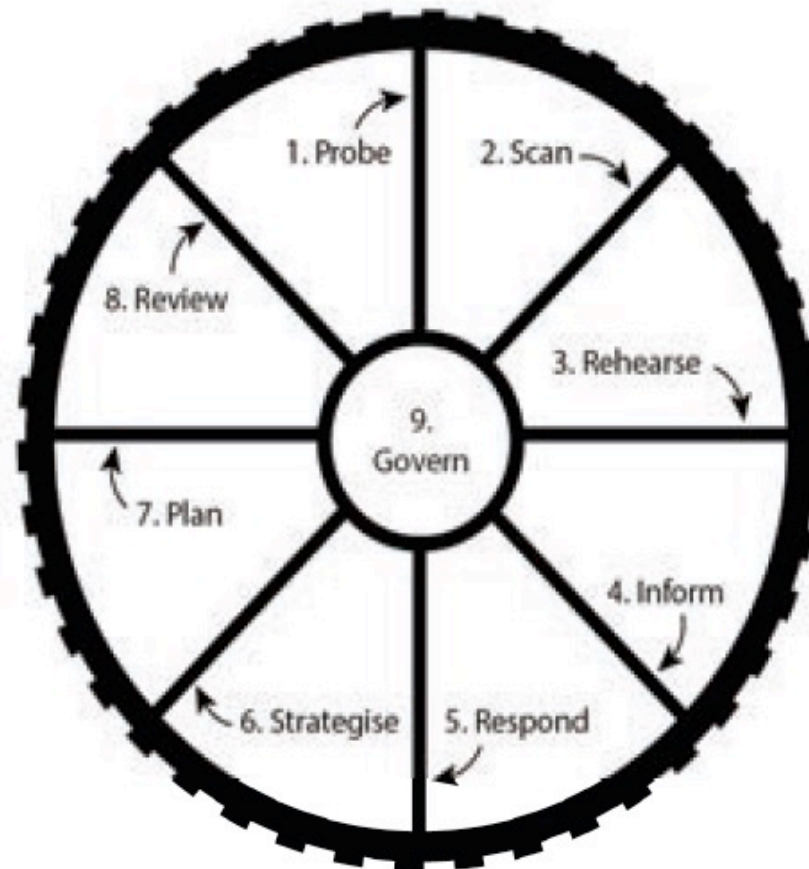
## **Businesses/ NGO –Improve Public/ Private Sector Partnership**

- Standardization
- Tough stand on use of in country systems and leadership
- Listen
- Implement Infrastructure



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# Building resilience into a supply chain system





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**Thank you!**

