

2014

# Ebola: Managing the Guinea Outbreak

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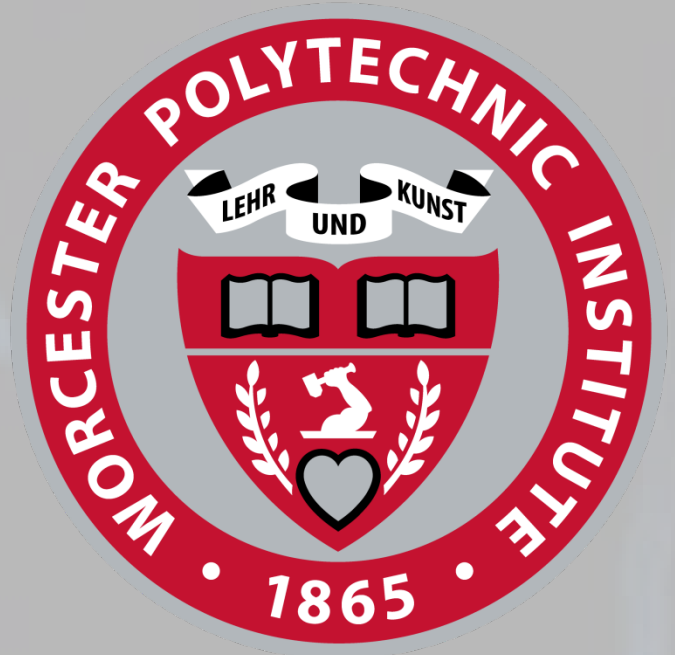
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# WPI

# Ebola: Managing the Guinea Outbreak

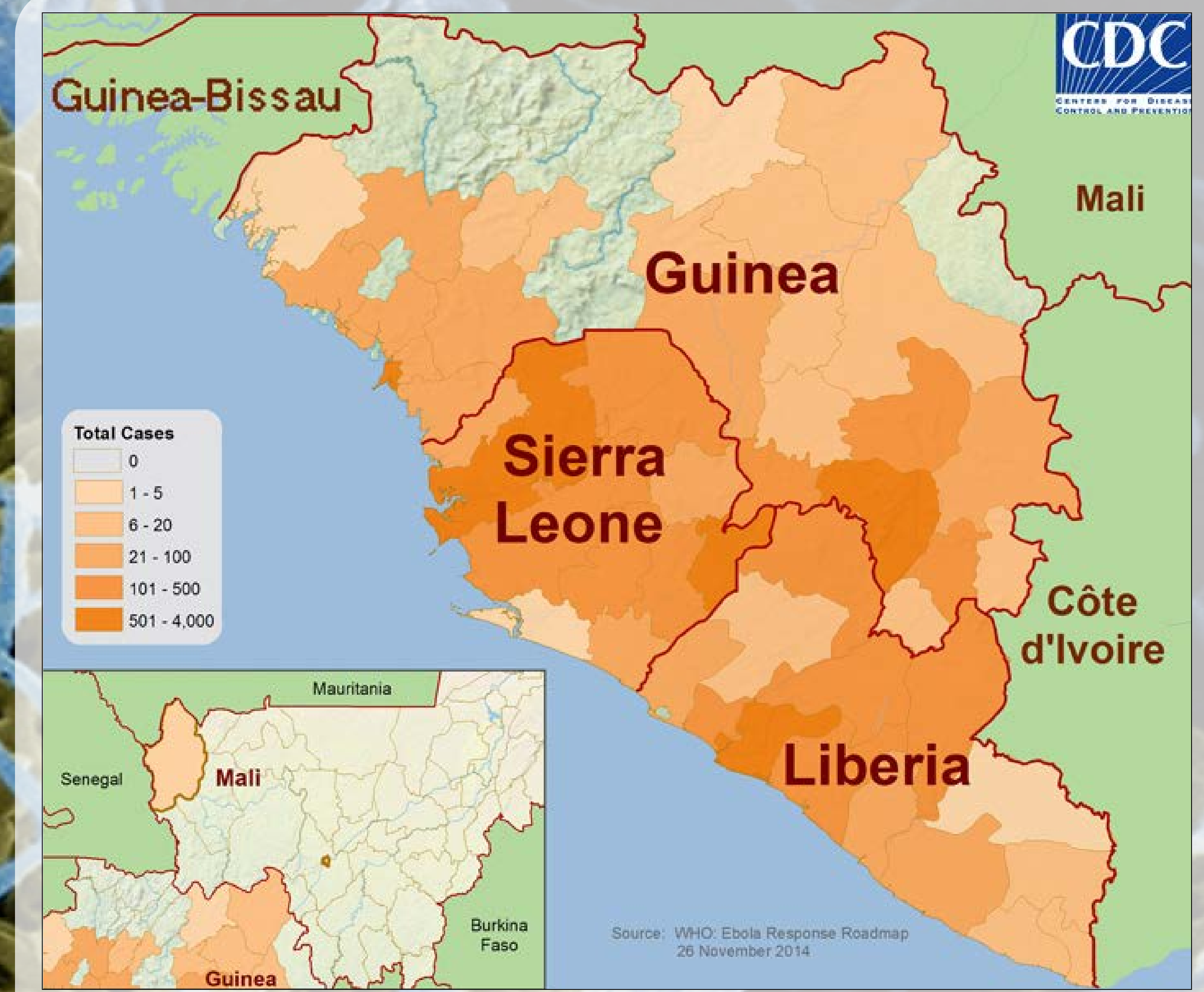
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Advisors: Professor Jill Rulfs (Biology), Professor Helen Vassallo (Business)

## Abstract

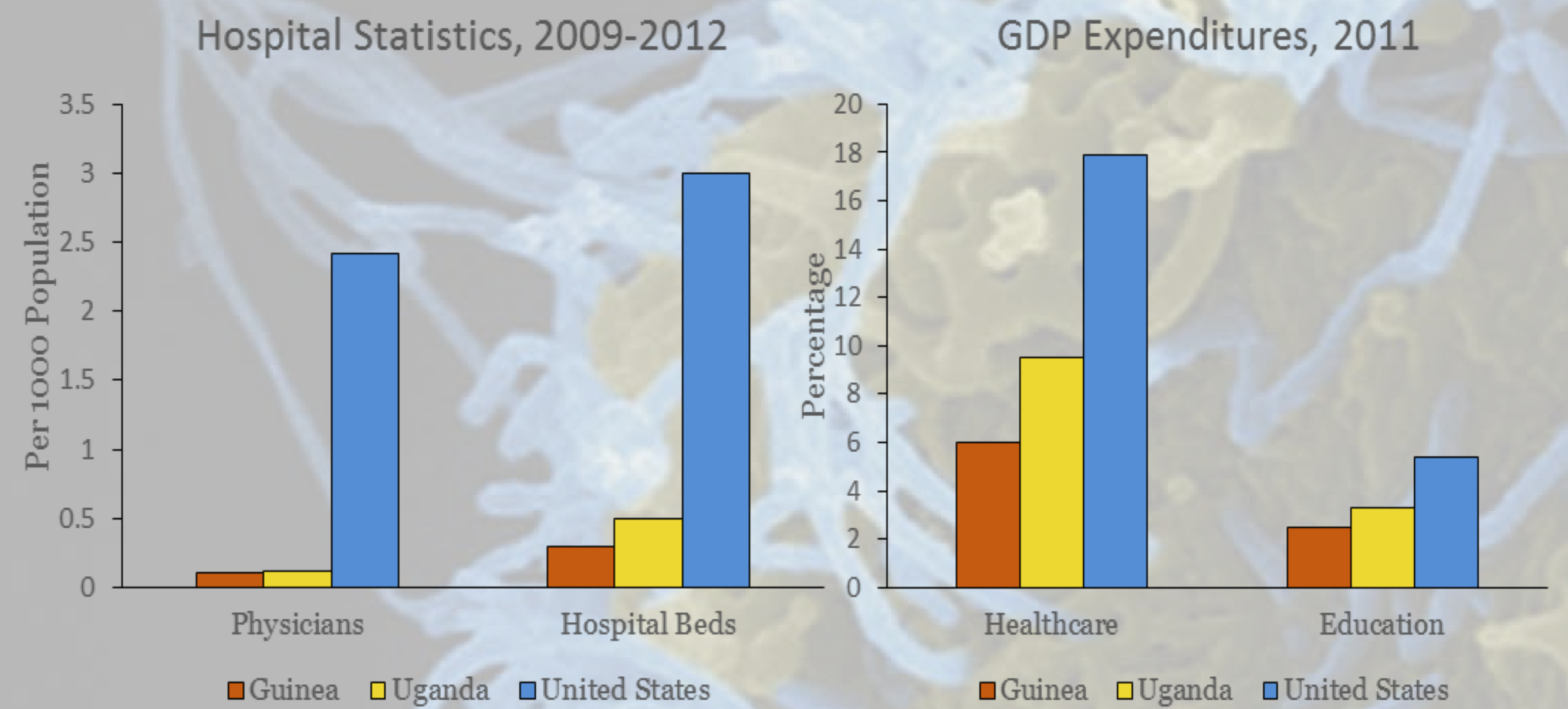
Ebola is a serious health issue in Guinea and current protocols need to change to successfully combat it. Our short term approach will supply resources to afflicted areas, and in the long term we plan to identify at-risk areas, fortify their medical systems, and educate the public on Ebola. Future outbreaks are expected to be contained with fewer cases and lower mortality rates. Through policy changes, Guinea will have the tools needed to deal with current and future Ebola outbreaks.

## Methods & Processes



Map of case density of West Africa Ebola outbreak, 9 November 2014

## Statistics

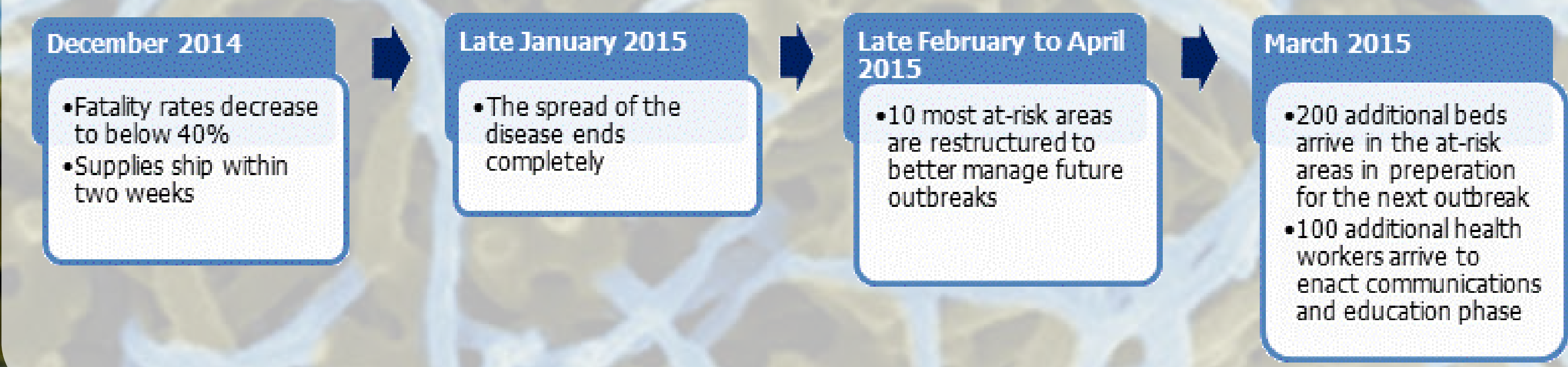


**Literacy Rates**  
 Guinea: 41%  
 Uganda: 73.2%  
 United States: 99%

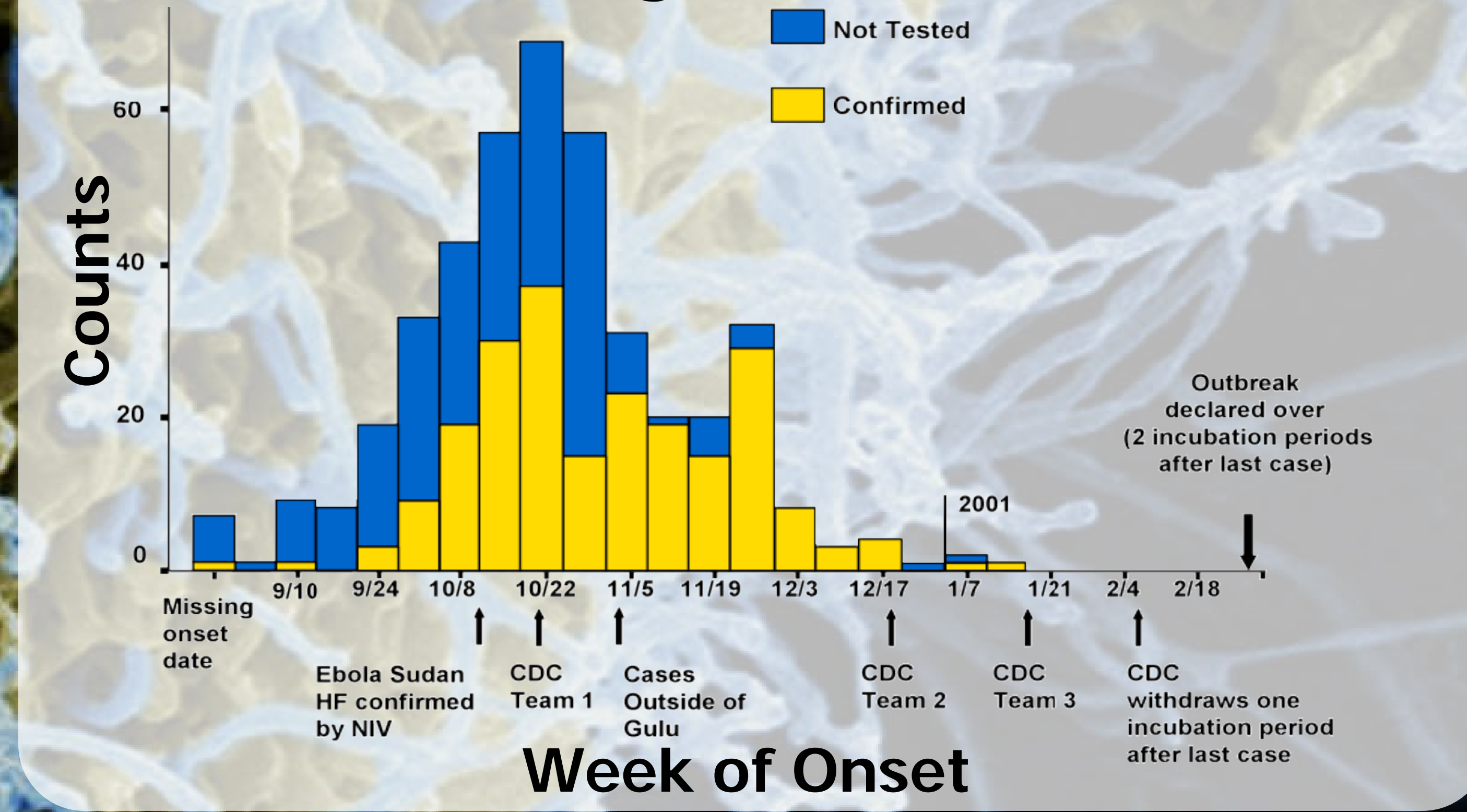
**Telephone Mainlines**  
 Guinea: 18 thousand  
 Uganda: 315 thousand  
 United States: 139 million

## Results & Outcomes

- End to current outbreak in early January 2015
- Future outbreaks cease 1-2 months after identification
- Future outbreaks <100 cases and <50 percent fatality rate



## Cases vs Time In 2000 Uganda Outbreak



## Project Goals & Objectives

- Improve protocols for containing and managing Ebola outbreaks
- Conduct research into current and past Ebola policies
- Analyze why containment protocols are not effective

## Conclusions & Recommendations

- If implemented, short term policies will lead to a swift end to current outbreak
- New long term strategy will prepare at-risk nations for future outbreaks
- Future response will be rapid and efficient

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