

Health System Strengthening in post-Ebola Liberia

A young boy with a joyful expression is holding a white certificate. He is wearing a light-colored, textured garment. The background features an orange safety net. The certificate has a blue border and contains the following text: 'Ministry of Health and Social Welfare' (partially visible), 'CERTIFICATE OF DISCHARGE', 'Name: MAMADEE SAYON', and 'Age: 11 years - M'.

Leveraging Existing Assets for Permanent Sustainability

CERTIFICATE OF DISCHARGE

Name: MAMADEE SAYON

Age: 11 years - M

Team 2

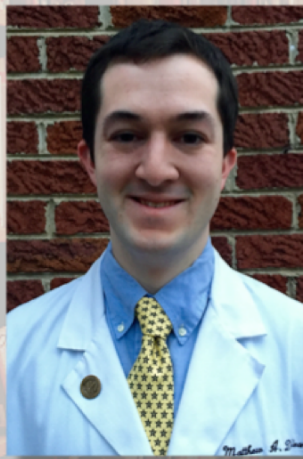
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Outline

- Post-EVD HSS
- Remaining resources
- Assets to Leverage
 - Ebola Treatment Units (ETUs)
 - Community Health Volunteers (CHVs)
- Data Collection, Innovation & Quality Assurance
- Timeline & Budget
- Monitoring & Evaluation
- Conclusion

International Ebola Response



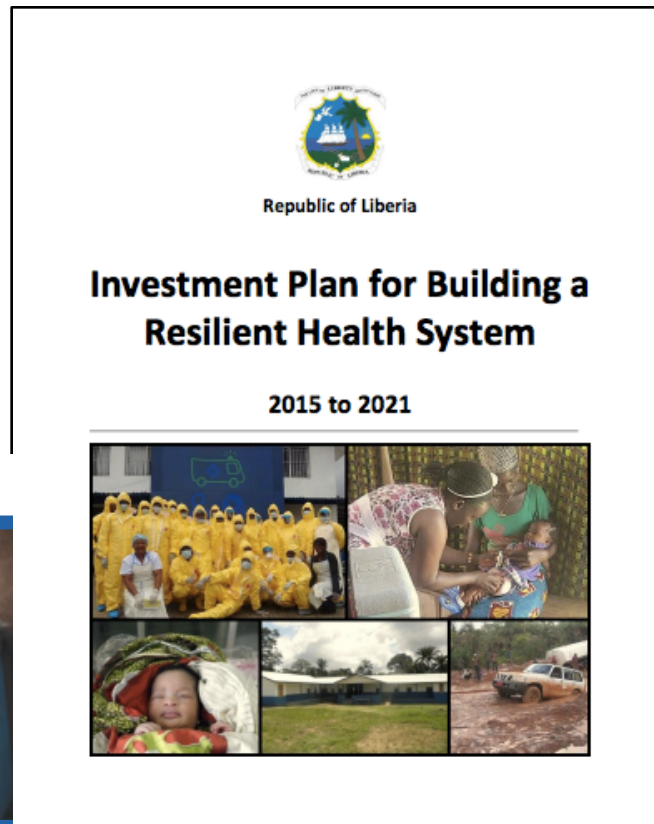
USAID
FROM THE AMERICAN PEOPLE



WORLD BANK GROUP



Current HSS Plans



1. Fit for purpose & productive health workforce



2. Re-engineered health infrastructure



3. Epidemic preparedness, surveillance & response system



4. Management capacity for medical supplies & diagnostics



5. Enhancement of quality service delivery system



6. Comprehensive information, research & communication management



7. Sustainable community engagement



8. Leadership & governance capacity



9. Efficient health financing systems

What do we do with these pre-existing resources?



Pre-existing
Resources

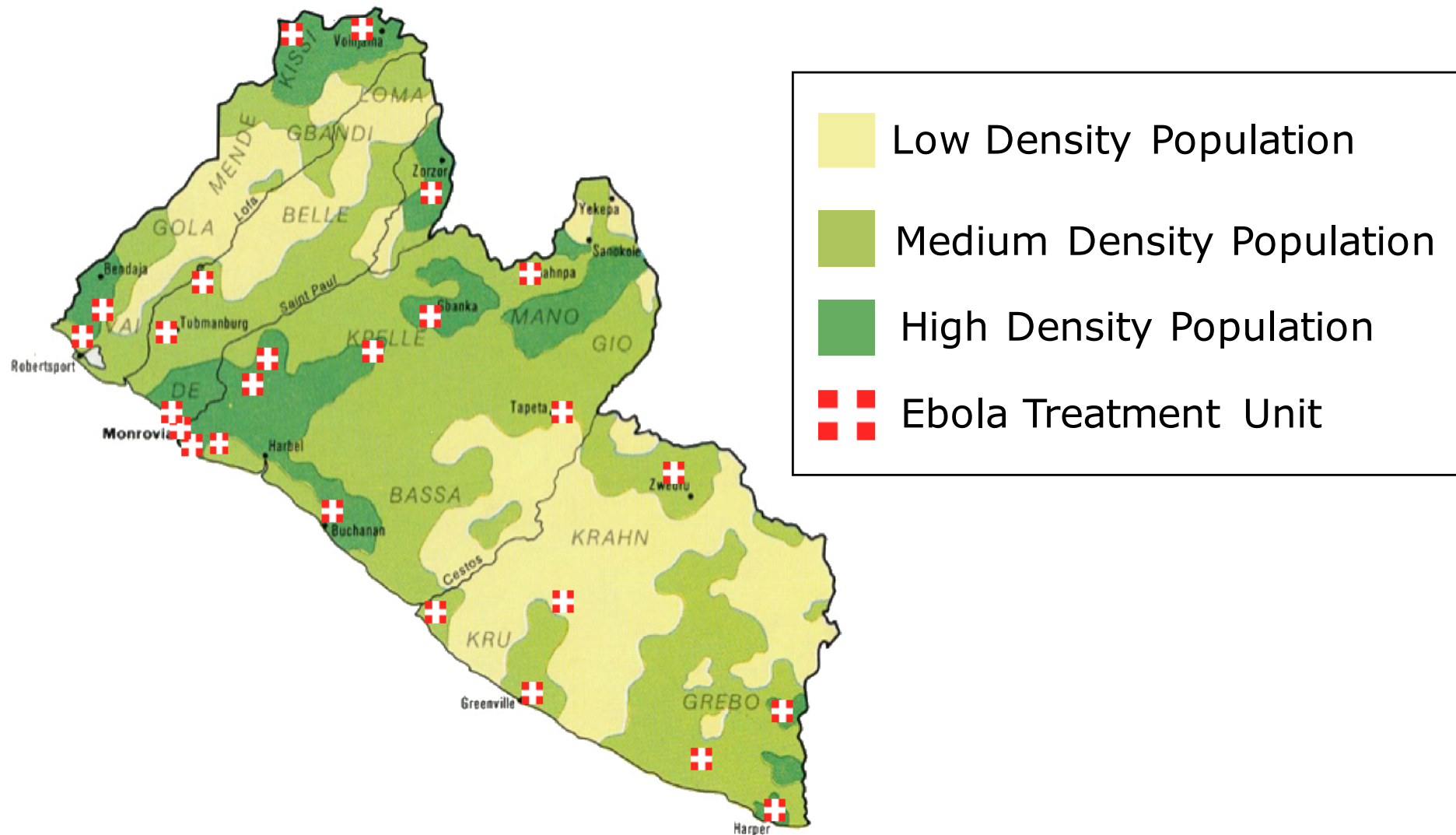
ETUs

CHWs

Data Collection

Operations

Map – Remaining Units



Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Leveraging Existing Assets for Permanent Stability

Ebola Treatment Units

Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Ebola Treatment Units (ETUs)



Pre-existing
Resources

ETUs

CHWs

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Operations

Transition ETUs to Public Health Hubs

1. Scrub and Decommission ETUs through Community Engagement Process



International Organization for Migration

Liberia

2. Revamp and Rebrand via Social Marketing



3. Extend Reach through Public-Private Partnerships



4. Transform in County Public Health Hubs



Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Structure of Public Health Hubs



Pre-existing
Resources

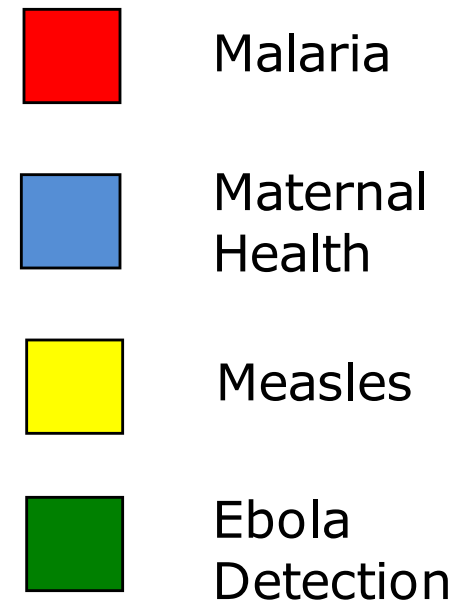
ETUs

CHWs

Data Collection

Operations

Region-Specific Approach



Country Profile

Project Proposal

Project Details

Operations

Conclusion

Leveraging Existing Assets for Permanent Stability

Community Health Workers

Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Liberia's Health Workers and Advocates

“as a community, we watch over each other”

- Pre-EVD
 - National Community Health Volunteer (CHVs) Program
 - >8,000 CHVs across all 15 counties
- Ebola Response
 - High-risk, high response from CHVs
 - Community Members
 - Formed Community Task Forces, Block Watch Teams
 - >18,000 religious leaders and traditional healers



Liberians are dedicated to their community's health!

Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Liberia's National CHV Program

Traditional Trained Midwives (TTMs)

Serve 125 - 250

Currently ~3,400

Seeking 3,000

1 hour walk

Community Health Volunteers (CHWs)

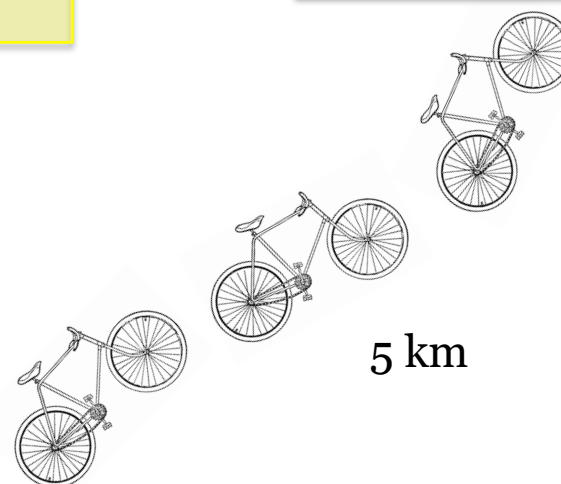
Serve 200 - 500

Currently ~4,550

Seeking 1,211

5 km

Name Change: CHVs
to Community Health
Workers (CHWs)



Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

CHWs: Recruitment & Training

■ Retain:

- Former CHVs, TTMs, Household Health Promoters (HHPs), Community Directed Distributors (CDDs)
- *Informal health sector*: traditional healers (THs), traditional birthing attendants (TBAs), medicine seller ('black baggers')

■ Retrain: MOH model, +county-specific intervention training

■ Recruit: volunteers active in EVD crisis

- Social marketing, advertise new incentives



Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Data & Surveillance: CHWs & TTM

Community Level

- Integrated Human Resource Information System (iHRIS)
 - Support: MOH expansion
 - Strengthen: baseline data
- Surveillance and early warning system – **weak**.
 - Support: Disease Early Warning System (eDEWS), mHERO
 - Strengthen: Regional Disease Projections (RDPs)
- Improve HMIS records

District Level

- DHIS reporting rates – **good**.
 - Support: pre-Ebola procedure
- Birth and death certificates, vital statistics system – **early implementation**.
 - Support: electronic system
 - Strengthen: Verbal Autopsy (VA) technology
- HMIS data entered *weekly*
 - Support: Expansion of Electronic System (SAGE ACCPAC) to district level

Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Proposal Summary

- Transition ETUs to Public Health Hubs
 - Storage
 - Training
 - Data Management
 - Surveillance
 - Potential Labs in Future
- Retain, Retrain, and Recruit CHWs
 - Surveillance
 - Connections to Care
 - Emerging Disease Threats
 - Building Trust and Morale in the Community

Pre-existing
Resources

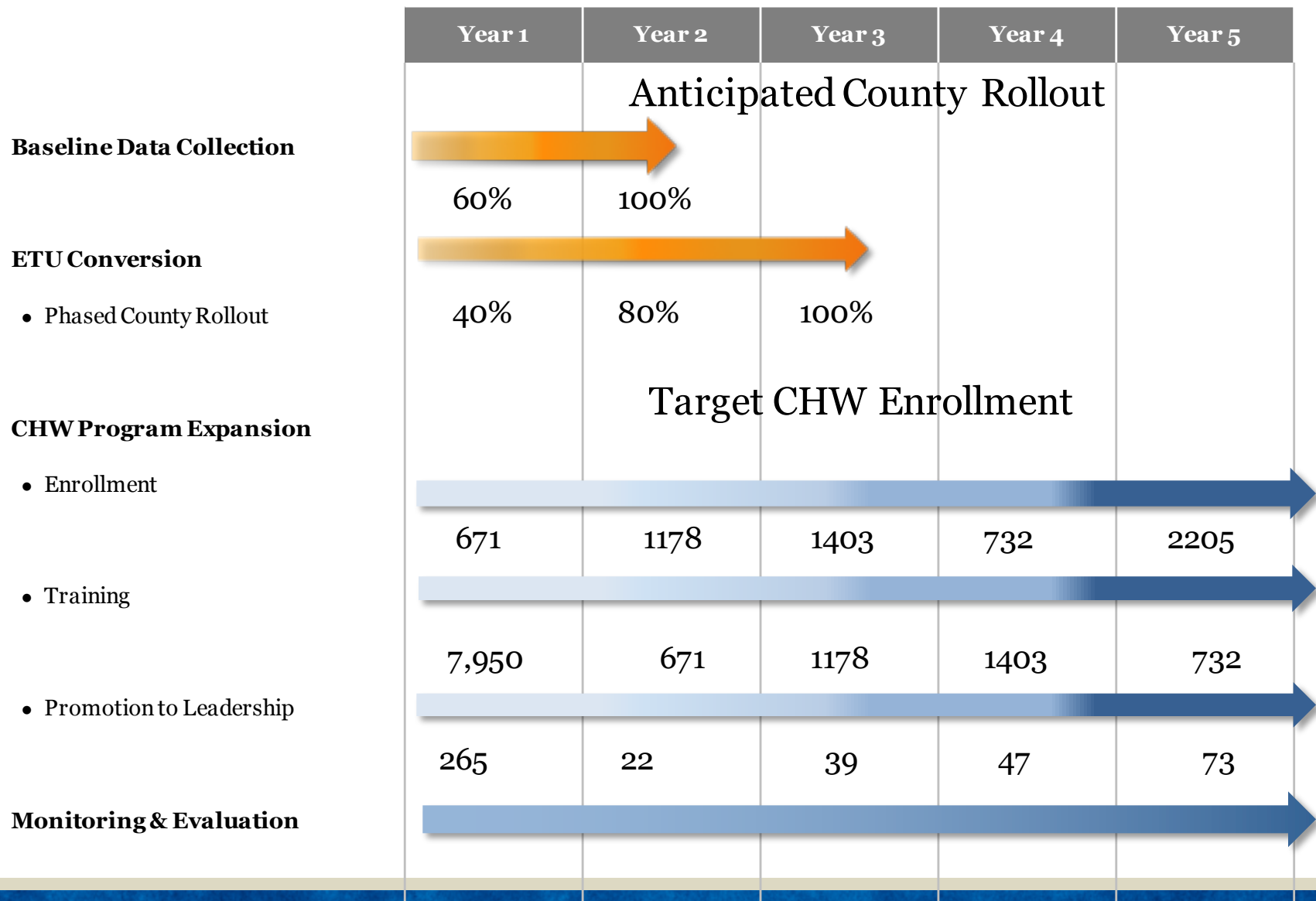
ETUs

CHWs

Data Collection

Operations

Operations & Logistics – Timeline



Pre-existing
Resources

ETUs

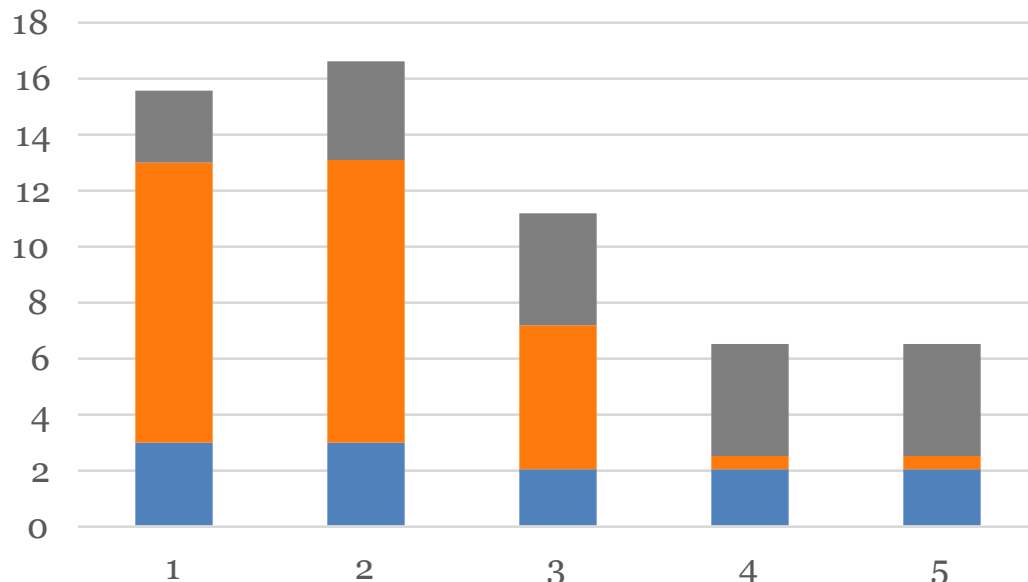
CHWs

Data Collection

Operations

Operations & Logistics – Budget

Projected Expenditures by Year (\$ millions)



CHW Program

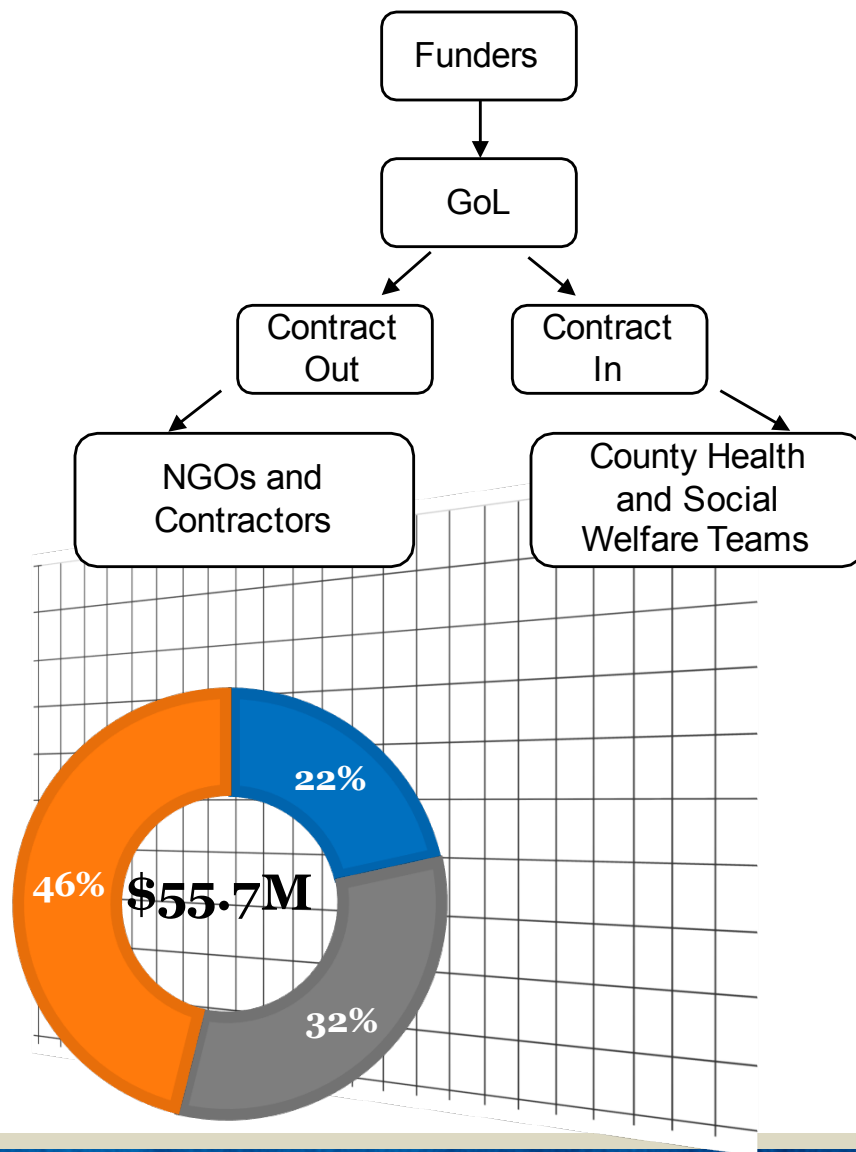
- Recruitment
- Training
- Incentives
- Management

Hub Creation

- Project infrastructure updates
- Introduction of new labs, etc.

M & E

- Phased rollout with treatment and control



Pre-existing
Resources

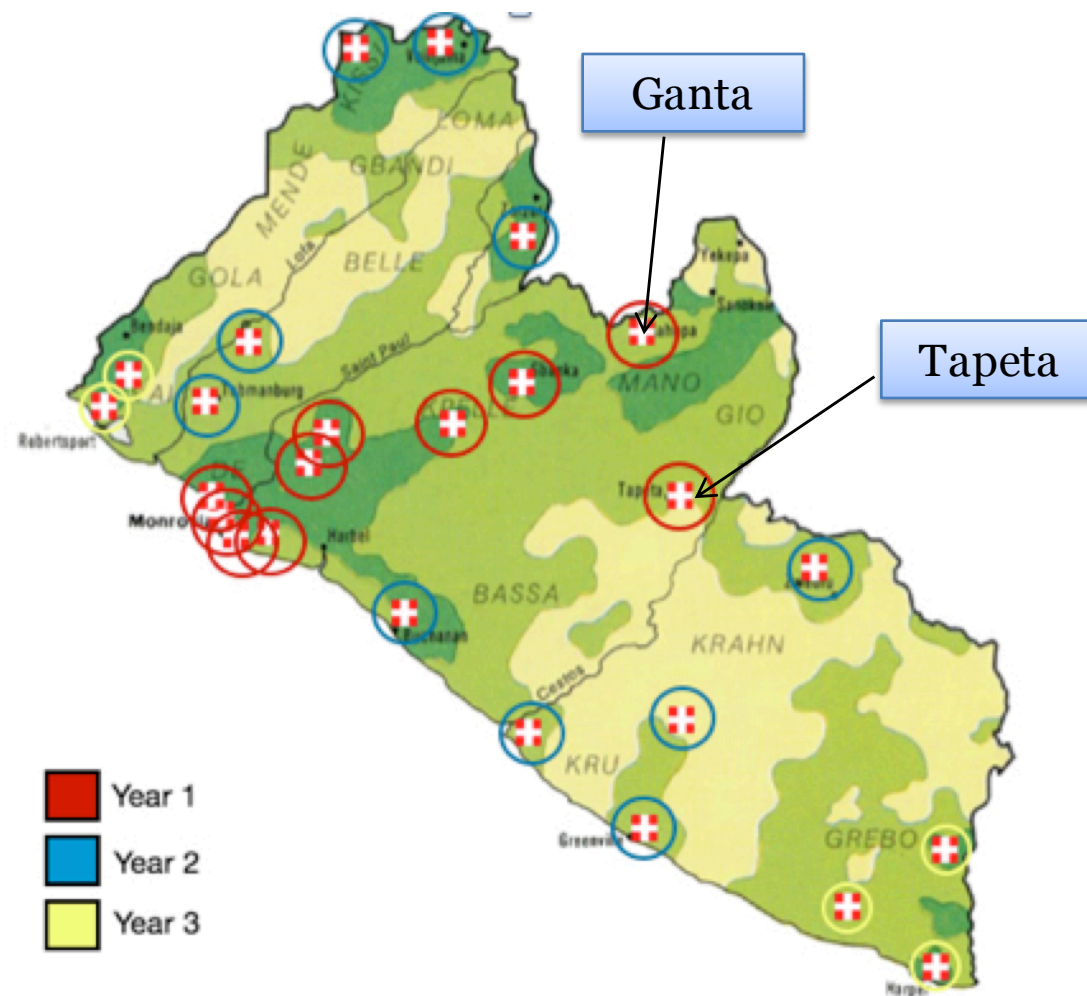
ETUs

CHWs

Data Collection

Operations

Monitoring & Evaluation



Pre-existing
Resources

ETUs

CHWs

Data Collection

Operations

Conclusion – An Opportunity to Rebuild



Leveraging assets from short-term crisis to build a long-term future.

Thank you!



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Appendices

Resilient Health System “Ideal” Budget

INVESTMENT AREA 2015-2021	FINANCIAL COMMITMENT
HEALTH WORKFORCE	511M
HEALTH INFRASTRUCTURE	387M
EPIDEMIC PREPAREDNESS, SURVEILLANCE AND RESPONSE	97M
ESSENTIAL MEDICINES & SUPPLIES	209M
SERVICE DELIVERY SYSTEMS	407M
HEALTH INFORMATION, RESEARCH & COMMUNICATION	6M
SUSTAINED COMMUNITY ENGAGEMENT	34M
LEADERSHIP AND GOVERNANCE	16M
HEALTH FINANCING	37M

~1.7 B

[Appendix](#)

Region-Specific Approach

Southern Coastal Counties

- Increased prevalence of malaria (significant post-Ebola increase of mortality)
- Risk of zoonotic transmission of Ebola low
- Widespread decrease in measles vaccinations post-Ebola

Southern Interior Counties

- Decreased prevalence of malaria (minimal post-Ebola increase of mortality)
- Risk of zoonotic transmission of Ebola high
- Limited and concentrated decrease in measles vaccinations post-Ebola

[Appendix](#)

Pre-existing
Resources

ETUs

CHWs

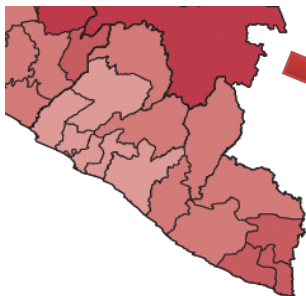
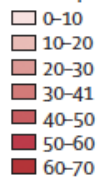
Data Collection

Operations

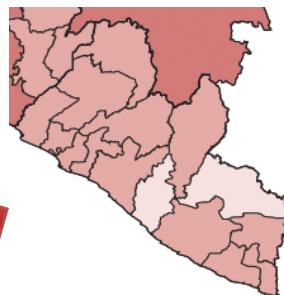
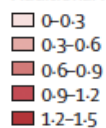
Region-Specific Approach

Using Mathematical Modeling to Solve Future, Emerging Challenges

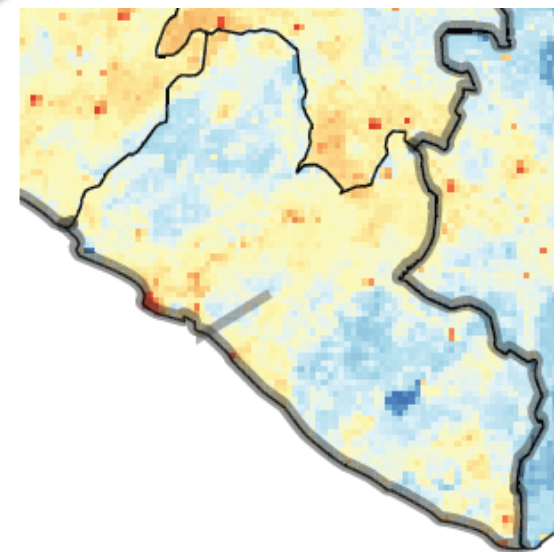
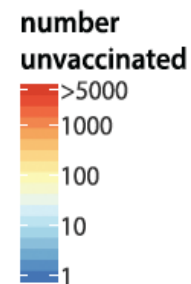
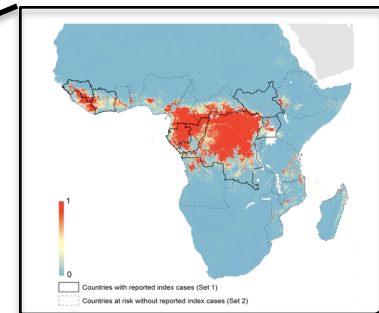
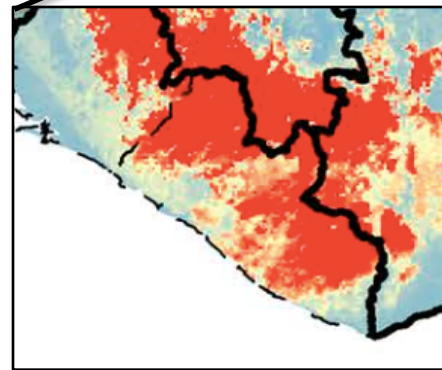
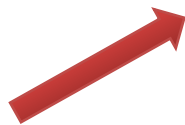
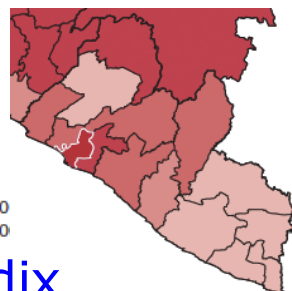
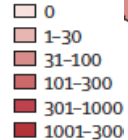
Malaria prevalence (%)



Additional malaria deaths per 1000 people



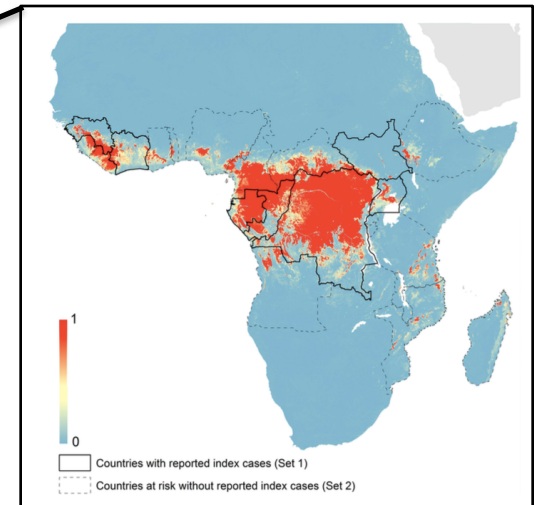
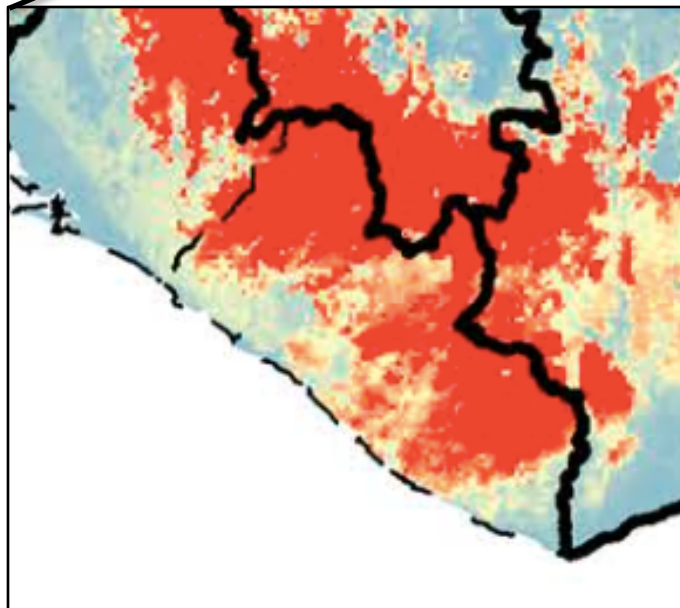
Ebola cases



[Appendix](#)

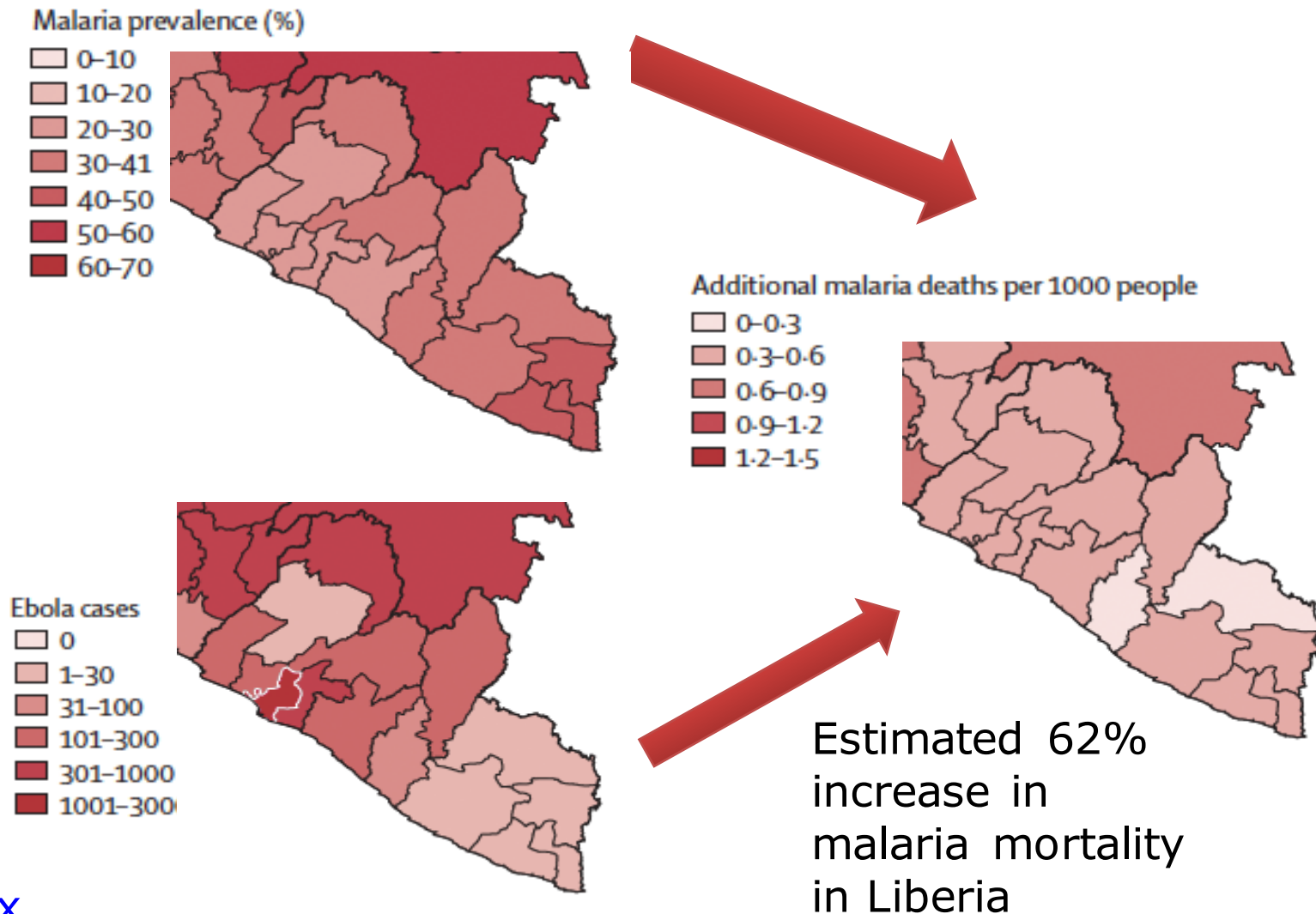
Probability of Ebola Outbreak Origin

Probability of
zoonotic Ebola
transmission

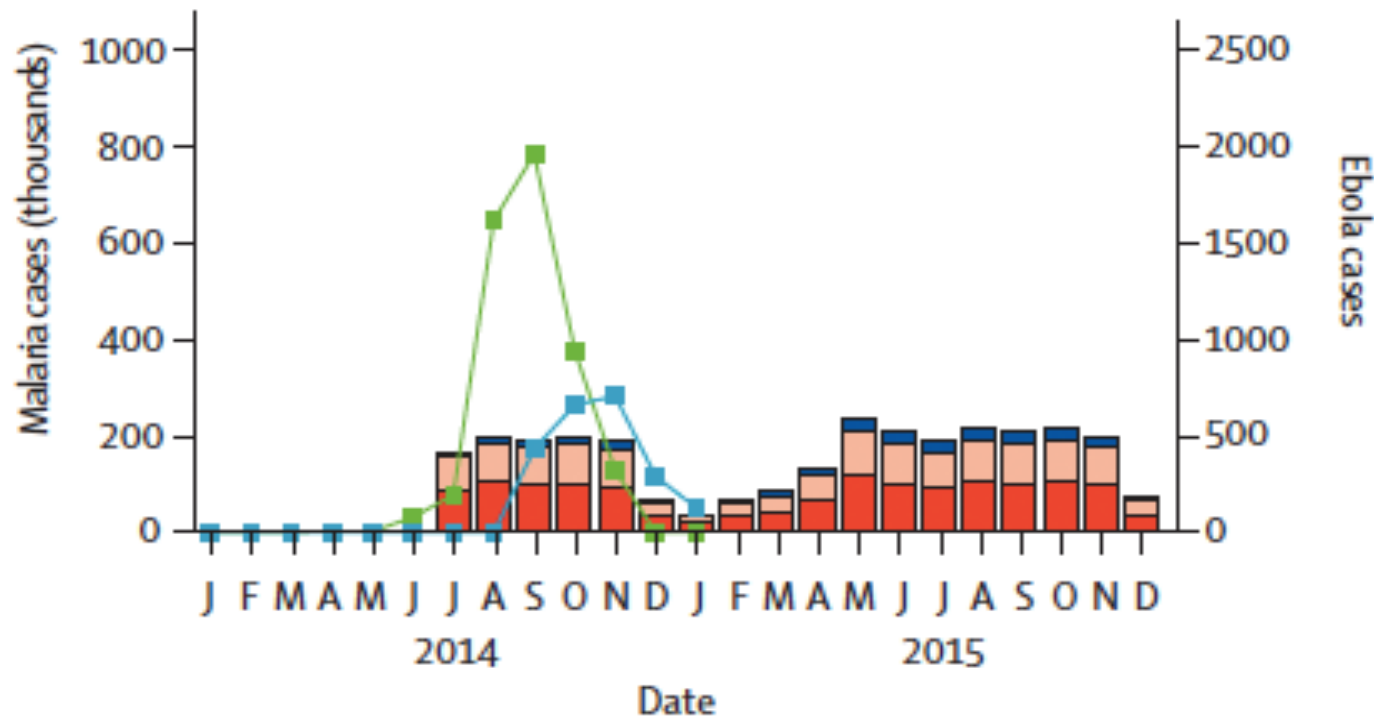


[Appendix](#)

Increased Threat of Malaria



Projected Increase of Malaria Post-Ebola



Pink = Untreated malaria cases

Red = Malaria cases treated when health system functioning

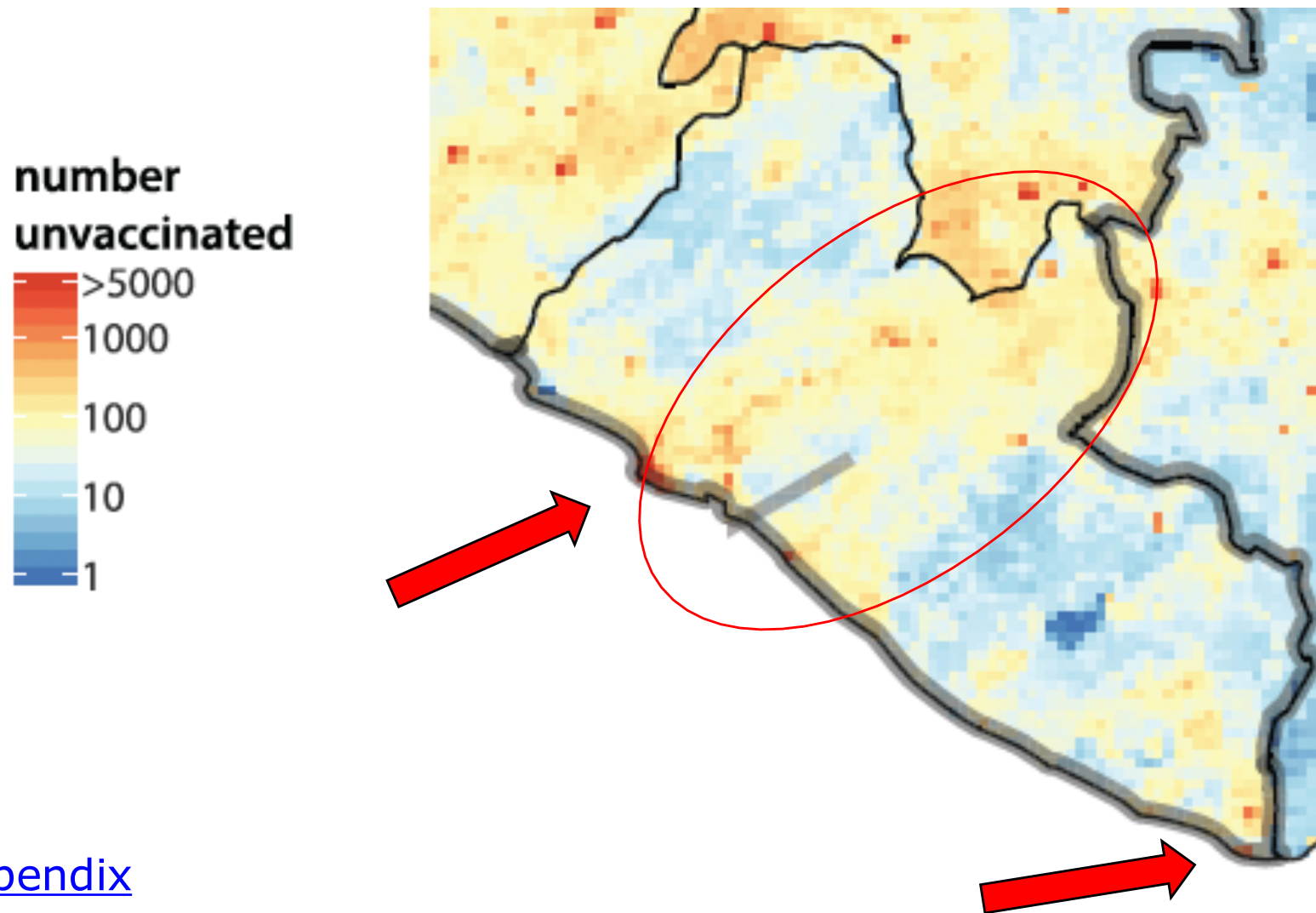
Blue = Additional malaria transmission due to untreated malaria cases

Green line = Ebola cases probable

Blue line = WHO report of Ebola cases

[Appendix](#)

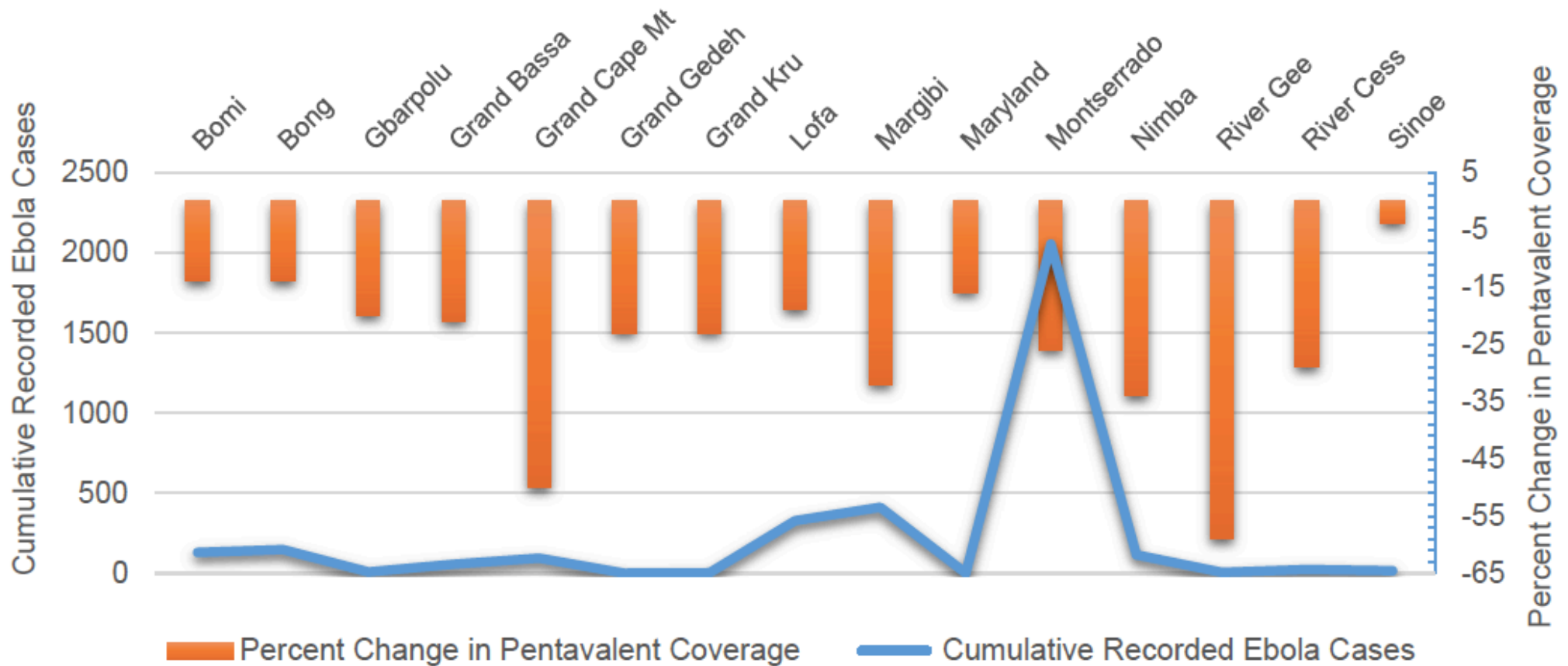
Post-Ebola Increase in Measles Cases Due to Decrease in Vaccination



Appendix

Decrease in Early Childhood Vaccinations

Liberia: Percent Change in Pentavalent Vaccine Coverage by County



Distribution of Paid and Unpaid HWs

Table 4.6: Payroll Status of MOH Health Workers by County (February 2015)

County	Not on Government of Liberia Payroll	On Government of Liberia Payroll	Total	% Not on Government of Liberia Payroll
Bomi	217	311	528	41%
Bong	339	415	754	45%
Cape Mount	224	228	452	50%
Gbarpolu	121	140	261	46%
Grand Bassa	243	258	501	49%
Grand Gedeh	434	236	670	65%
Grand Kru	140	179	319	44%
Lofa	449	356	805	56%
Margibi	151	225	376	40%
Maryland	302	164	466	65%
Montserrado	595	2505	3100	19%
Nimba	204	448	652	31%
River Gee	257	128	385	67%
Rivercess	198	142	340	58%
Sinoe	258	185	443	58%
Total	4132	5920	10052	41%

National Community Health Volunteer Program

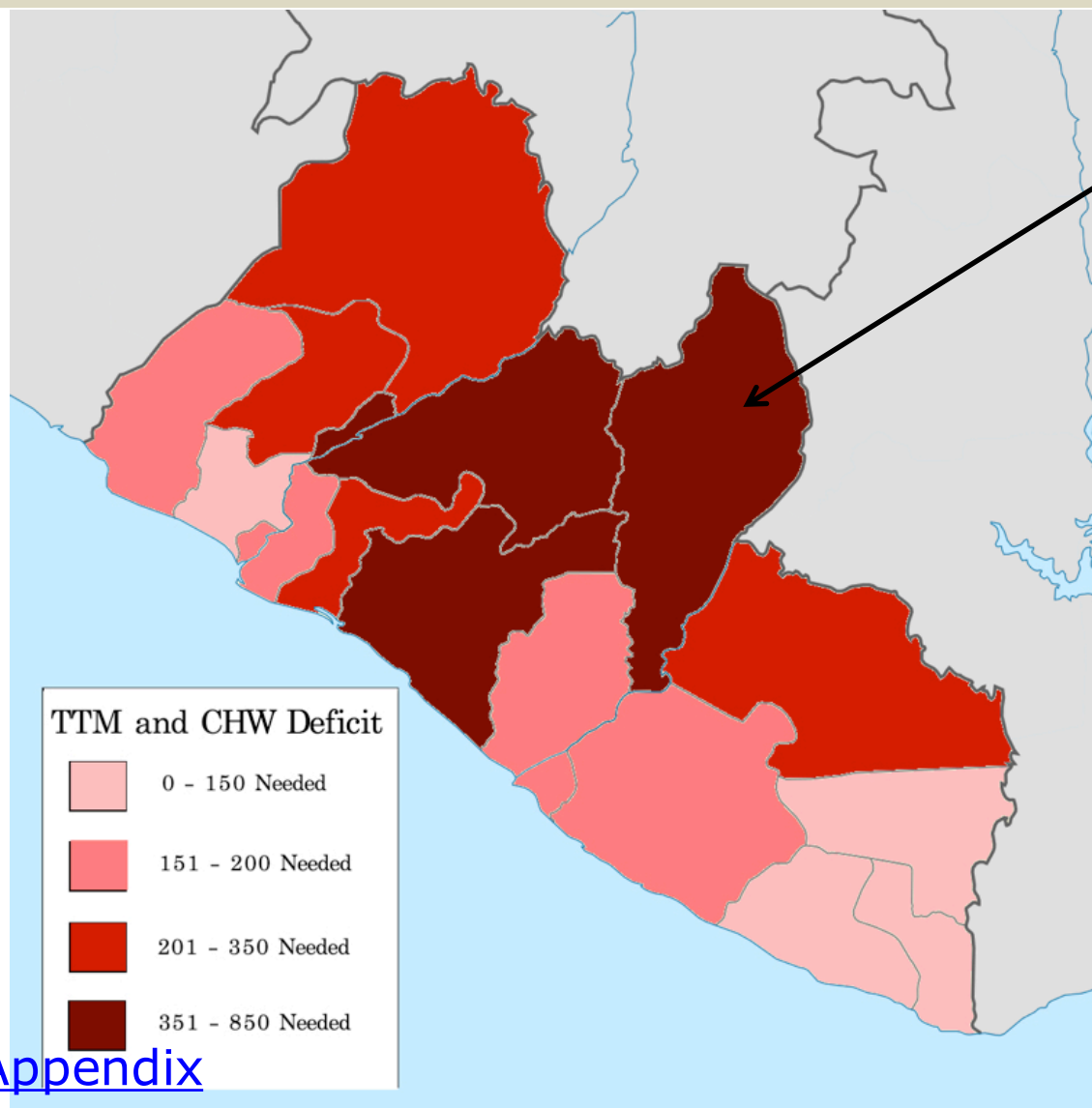
Intervention		General Community Health Volunteer				Trained Traditional Midwife			
	Services/Products	Information/ education	Counseling	Administered and/or provided product	Referral	Information/ education	Counseling	Administered and/or provided product	Referral
Family Planning	SDM/FAM	X	X		X	X	X		X
	Condoms	X	X	X	X	X	X	X	X
	Oral pills	X	X	X	X	X	X	X	X
	DMPA (IM)	X	X	X	X	X	X	X	X
	Implants	X	X		X	X	X		X
	IUDs	X	X		X	X	X		X
	Permanent methods	X	X		X				
	Emergency contraception	X	X		X	X	X	X	X
HIV/AIDS	Voluntary counselling and testing (VCT)	X							
	Prevention of mother-to-child transmission (PMTCT)	X							

Appendix

National Community Health Volunteer Program

Maternal and child health (MCH)	Misoprostol (for prevention of postpartum hemorrhage - PPH)					X		X	X
	Zinc	X	X	X	X				
	ORS	X	X	X	X				
	Immunizations	X	X		X				
	Cotrimoxazole	X	X	X	X				
	Vitamin A	X	X	X	X				
	De-worming	X	X	X	X				
	Iron							X	
Malaria	Bed nets	X	X		X	X	X	X	
	Indoor residual spraying (IRS)	X			X				
	Sulphadoxine-pyrimethamine (for treatment of uncomplicated malaria) (SP)	X	X	X	X				
	Intermittent preventive treatment					X	X	X	

Appendix



Nimba County

Population: 534,376

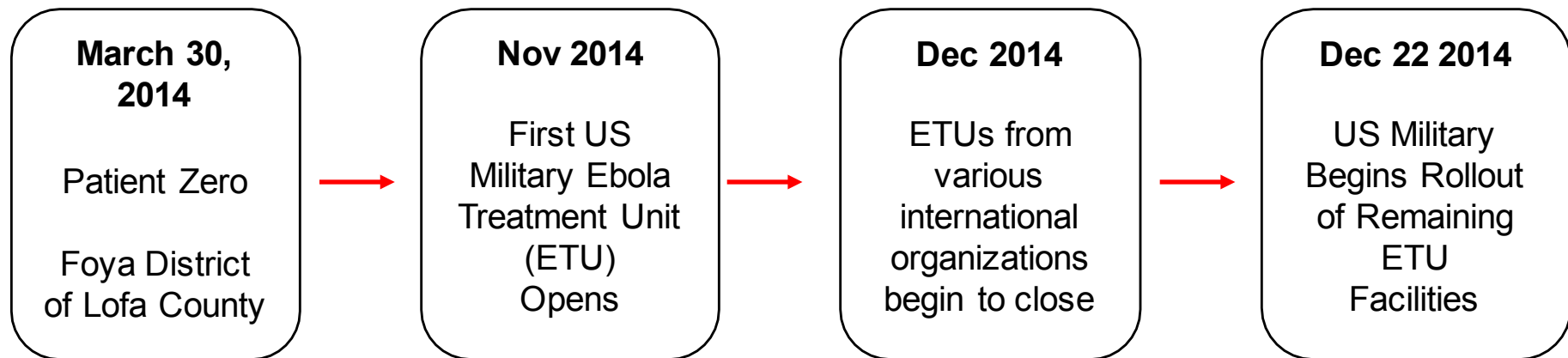
Percent of Population Living
Farther than 5km away from a
health facility: 42%

Number of Needed CHWs: 1,122
Number of Existing CHWs: 886

Number of Needed TTMs: 1,247
Number of Existing TTMs: 662

Recruit an additional:
236 CHWs
558 TTMs

US Military Ebola Interventions



But after spending hundreds of millions of dollars and deploying nearly 3,000 troops to build [Ebola](#) treatment centers, the United States ended up creating facilities that have largely sat empty: Only 28 Ebola patients have been treated at the 11 treatment units built by the United States military, American officials now say.

Nine centers have never had a single Ebola patient.

What do we do with these abandoned resources?



Ministry of Defense ETU
NPR, May 2015



Politico, Jan 2015



NYT, April 2015



NYT, April 2015

Appendix

Country Profile

Project Proposal

Project Details

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Conclusion