



**Partners
In Health**

Ebola: From Emergency to Recovery

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Partners In Health**



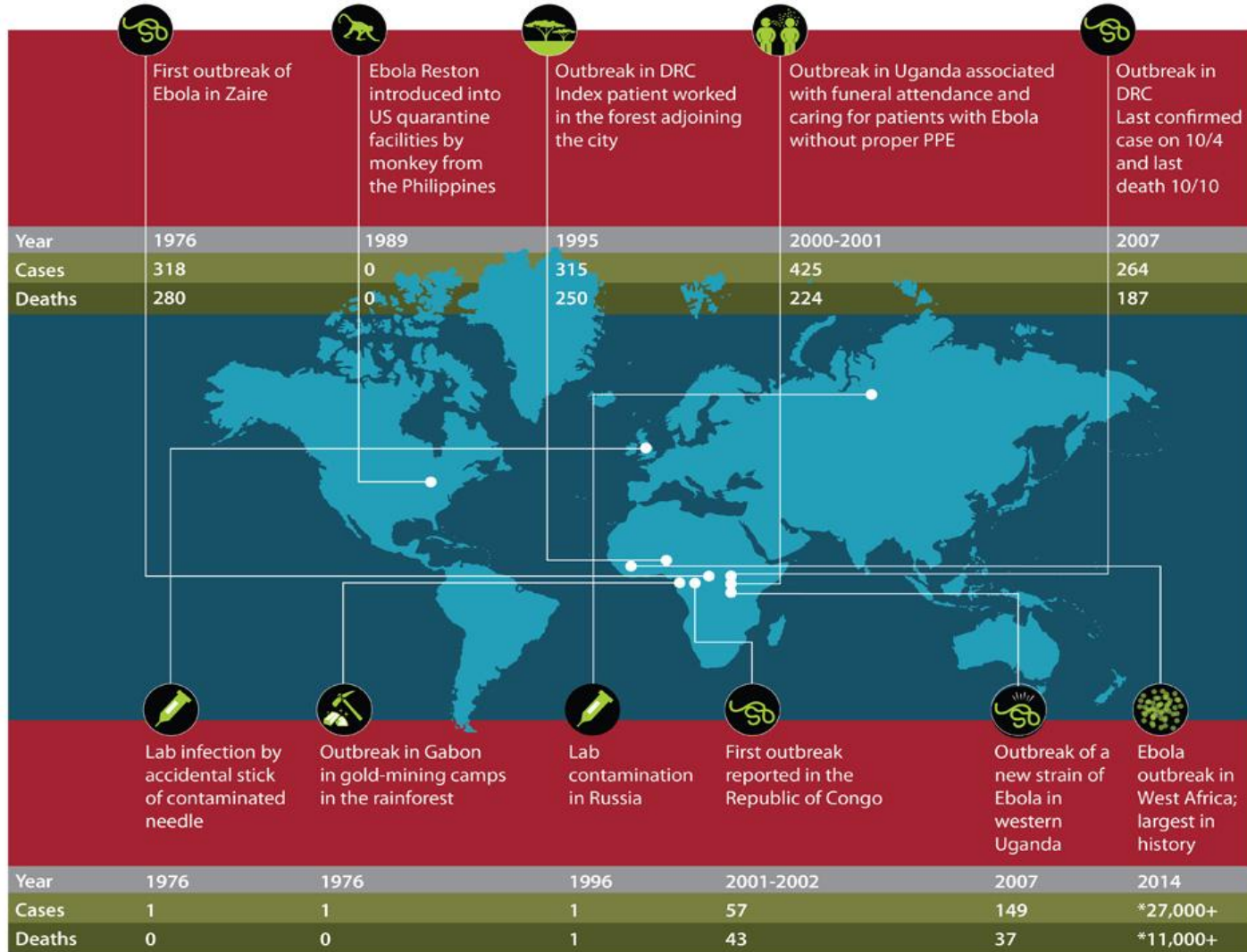
“Infectious diseases remain one of the biggest risks facing humankind. Few events are capable of equal damage to human lives and livelihoods. Yet the global community spends relatively little to protect populations from the risks of pandemics. Compared with other high profile threats to human and economic security—such as war, terrorism, nuclear disasters, and financial crises—we are underinvested and underprepared.”







Ebola Virus Disease – Previous Outbreaks



“We need you on the ground. The window of opportunity to contain this outbreak is closing. We need more countries to stand up, we need greater deployment, and we need it NOW.”

Dr. Joanne Liu

International President, Medecins Sans Frontieres

16 September 2014

<http://www.msf.org/article/msf-presidents-remarks-un-special-briefing-ebola>





Slow vs. Fast Response?

- Current (“25th recorded”) outbreak of EVD thought to begin in 12/2013 in Guinea Rain Forest
- Patients not dx’d until epidemic among HCWs
- Cases in all 3 countries by 4/2014
- WHO warns against “over-reaction” in 4/2014
- MSF declares EVD “out of control” in 6/2014
- As of 10/2015
 - 28,539 cases
 - 11,298 deaths
 - 881 cases in HCW
 - 513 deaths in HCW





When does it matter to the world?



- The first Ebola patient to be diagnosed in the U.S. died Wednesday (10/8/14).
- Three days earlier, government health officials in Sierra Leone reported 121 Ebola deaths in a single day.
- But Western media made little mention of the latter.

Emily Thomas Huffington Post

http://www.huffingtonpost.com/2014/10/08/ebola-illustration-andre-carrilho_n_5955192.html







Ebola Today

- Worldwide, there have been 28,646 cases of Ebola virus disease and 11,323 deaths as of March 27, 2016.
- New cases in Liberia mark the country's third flare-up of Ebola virus disease since its original outbreak was declared over on 09 May 2015.





Ebola Virus Disease – West Africa Epidemic

- Initial Phase (December 2013 – March 2014)
 - First cases in remote rural areas of Guinea
 - Cases spread to Sierra Leone and Liberia
 - Lack of capacity of local governments and WHO to contain the outbreak
- Second Phase (April 2014 – June 2014)
 - Cases spread to the three capital cities
 - Initial response by international NGOs
 - MSF declares the epidemic “out of control”, failure of WHO to mobilize the global community
- Third Phase (June 2014 – December 2015)
 - Exponential increase in number of cases
 - Mobilization of global community
 - WHO Director General declares the Ebola outbreak a public health emergency of global concern
 - World Bank commits \$200 million
 - Launch of the UN Mission’s for Emergency Ebola Response
 - U.S. Government commits \$3.7 billion



Fourth, Fifth, Sixth.....Phases

- December 2015- April 2016 and beyond
 - Numbers start to decline
 - All three West African countries have been declared “Ebola-free” but all three have had recurrence of cases





Ebola in HCW's

- From 1 January 2014 to 31 March 2015, 815 confirmed and probable health worker EVD cases were recorded in the VHF database, with 328 in Sierra Leone, 288 in Liberia and 199 in Guinea.
- An additional 225 suspected cases were reported, with 117 from Liberia, 108 from Sierra Leone and none from Guinea. Suspected cases are not included in these analyses.
- 2/3 of infected HCW died.





Ebola Virus Disease – West Africa Epidemic

THE FINANCIAL COST OF THE EBOLA EPIDEMIC

\$4.3bn

The amount committed by external donors to fight Ebola in Sierra Leone, Guinea and Liberia so far.

This is **15 times** the annual national health budgets of the three countries combined.

\$1.58bn

The 2012 gap in budgets to ensure essential healthcare for all the populations for all three countries.

3x

The cost of dealing with this Ebola outbreak is nearly **three times** the annual cost of investing in building a universal health service in all three affected countries.

In the moment of crisis, the wise build bridges and foolish build dams.

-Nigerian Proverb



Our Mission

PIH delivers high-quality health care in some of the **world's poorest communities.**

By pushing the boundaries of what's possible in health care, PIH has a **global impact.**



Where We Work



Our Approach





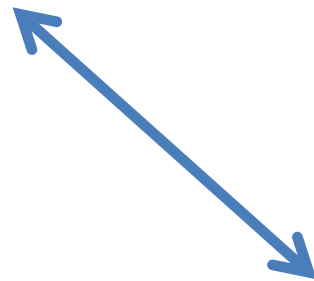
Model for comprehensive care guided by a preferential option for the poor: attend to people who suffer most from poverty and transform the system so that it serves them



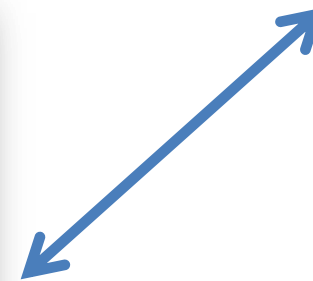
Community-based



Hospital-linked



Health-center enriched



we go
we make **house calls**
we build **health systems**
we **stay**





Our Principles

We go. We travel to remote places where health care options are limited or barely exist.

We make house calls. We visit patients in their homes to deliver medication and guide them through treatment.

We build health systems. We work closely with national governments and other partners to improve and expand health services.

We stay. We make long-term commitments to the communities we serve.





5 Pillars of **PIH's** Ebola Response

Direct effort and support of government

1. Stop transmission
2. Treat Ebola
3. Strengthen health systems
4. Train health professionals
5. Generate new knowledge

PIH-SUPPORTED FACILITIES

DISTRICTS AND COUNTIES





Sierra Leone





Sierra Leone

- Total population: 6.1 million
- Life expectancy: 46 years
- Under 5 mortality rate: 120 per 1,000
- Maternal mortality: 1,100 per 100,000
- Adult prevalence of HIV: 1.6%
- Population living below national poverty line: 53%

#Survivors Count





Scene from Freetown, Sierra Leone.
Photo by Rebecca E. Rollins / Partners In Health



Ebola survivors Momoh "Emoze" Kamara and Mohamed Nao wind through the streets of Freetown, Sierra Leone, after being hired as PIH community outreach staff.
Photo by Rebecca E. Rollins / Partners In Health



Yabom Karoma





Maforki ETU





Maforki ETU Triage-Port Loko





Maforki ETU-Port Loko





PIH nurse Cheedy Jaja prepares to enter an infectious area of Maforki ETU.
Photo by Rebecca E. Rollins / Partners In Health



A patient prepares to receive an IV at Maforki ETU.
Photo by Rebecca E. Rollins / Partners In Health



A PIH clinician pours oral rehydration solution. IV and ORS treatments are used simultaneously for each patient who is admitted to the ETU.
Photo by Rebecca E. Rollins / Partners In Health



Government Hospital Port Loko





PIH clinician Dr. Regan Marsh cares for Ebola survivor Mariatu, 9.
Photo by Rebecca E. Rollins / Partners In Health



Jariuntu











PIH Key Initiatives: Staff, Stuff, Space & Systems

- 1) Safe Triage & Isolation
- 2) Health Provider Capacity-Building & Support
- 3) Infection Prevention & Control
- 4) Disease Prevention and Surveillance
- 5) Infrastructure & Supply Chain
- 6) National Planning
- 7) Build Health Systems
- 8) Quality health care



Ebola: The Missing Staff, Stuff, Space, and Systems

	Beds	Electricity?	Running Water?	Oxygen?	Surgeons	Anesthesiologists	OB/Gyns
Port Loko Govt. Hospital	200	No	No	Interrupted	1	0	0
Princess Christian Maternity Hospital	120	Interrupted	Interrupted	Interrupted	0	1	4

“In our needs assessment of government hospitals in Sierra Leone, a profound lack of protective supplies and equipment was documented. Items such as gloves, eye protection, and aprons were routinely in short supply. We found that government facilities were unacceptably deficient in protective supplies, whereas nongovernmental, private facilities were fully stocked.”

Kingham TP, Kamara TB, Daoh KS, et al. Universal Precautions and Surgery in Sierra Leone: The Unprotected Workforce. *World Journal of Surgery* 2009; 33: 1194-1196.

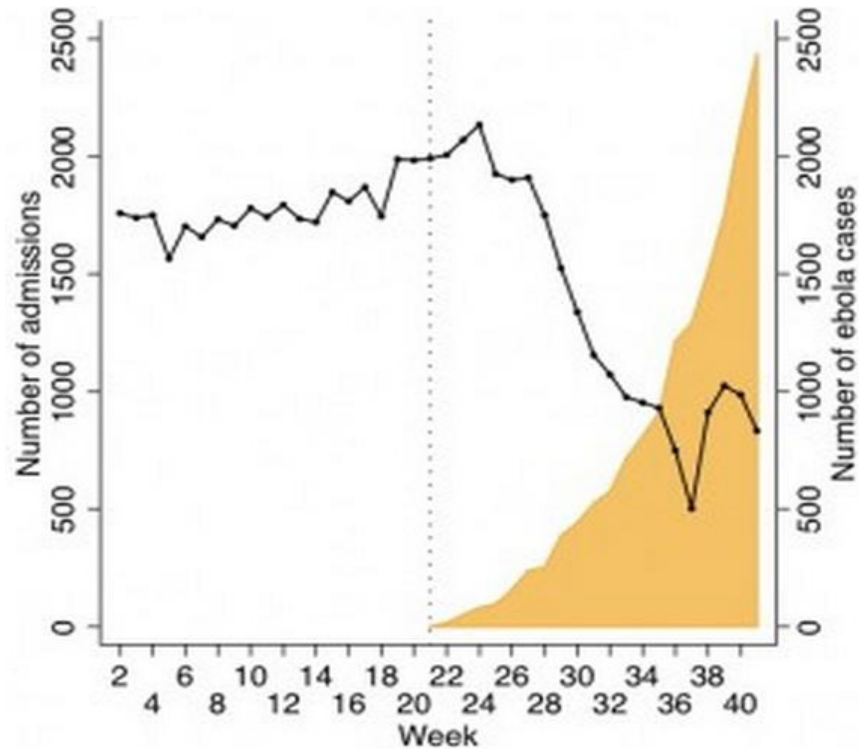
Kingham TP, Kamara TB, Cherian MN, et al. Quantifying Surgical Capacity in Sierra Leone. *Archives of Surgery* 2009; 144: 122-127.

Two Tasks, One Team

Respond to Ebola, Build/Rebuild Health Systems



Weekly admissions at facilities offering basic surgical services in Sierra Leone, 2014



Bolkan HA, Bash-Taqi DA, Samai M, et al. Ebola and Indirect Effects on Health Service Function in Sierra Leone. *PLOS Currents Outbreaks* 2014 [e-pub].

Ndawinz JDA, Cissé M, Diallo MSK, et al. Prevention of HIV Spread During the Ebola Outbreak in Guinea. *Lancet* 2015; 385; 1393.

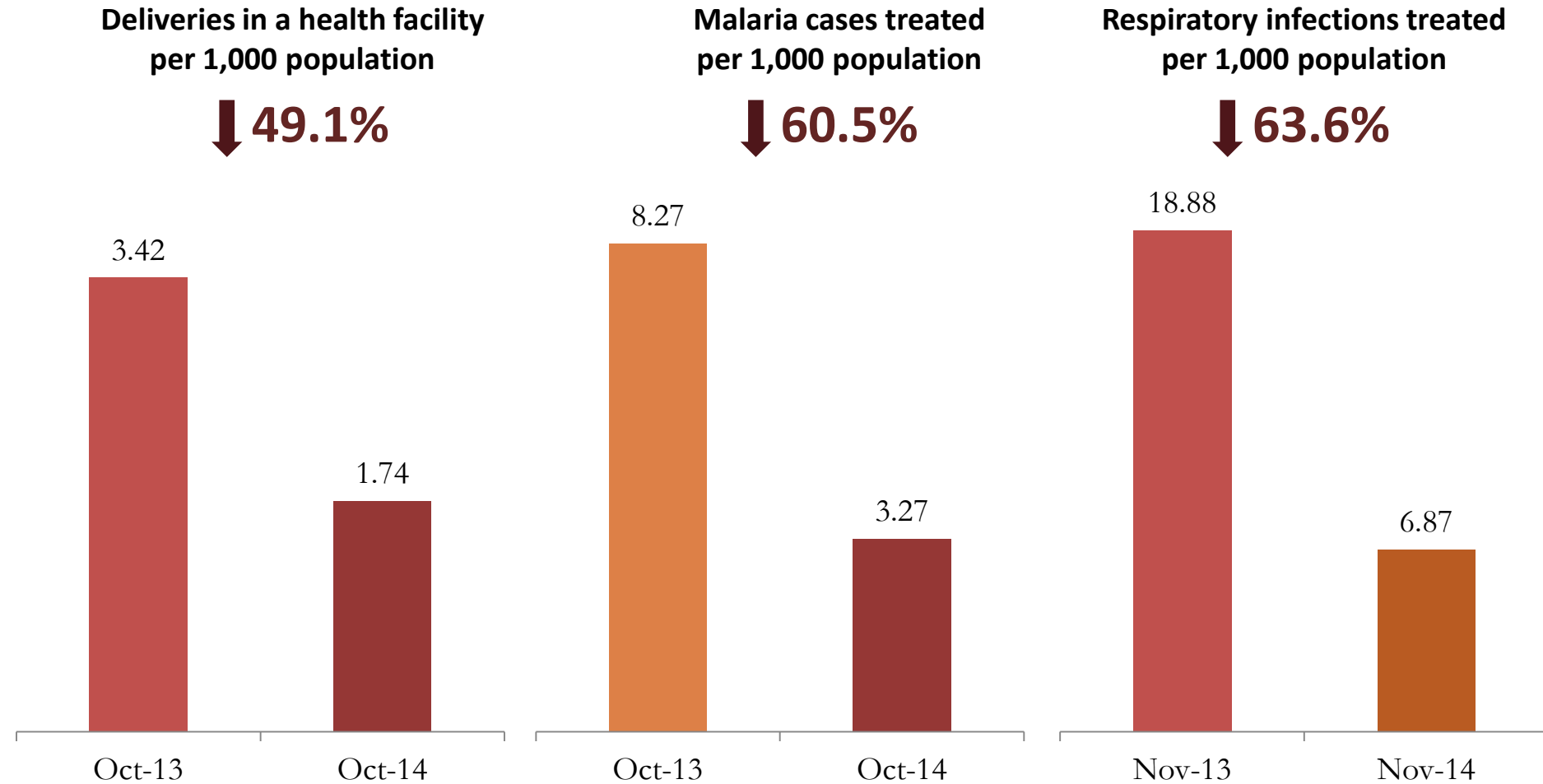


“In a comparison of present-day Sierra Leonean and US Civil War hospitals, the US Civil War facilities are equivalent and in many ways superior.”

Procedure	Sierra Leone public hospitals (2008)	US Civil War field hospitals (1864)
Basic suturing	Common	Common
Wound debridement	Common	Common
Closed fracture management	Common	Common
Open fracture management	Rare	Common
Limb dislocation management	Rare	Common
Amputation	Rare	Common
Foreign body removal	Rare	Common
Chest tube insertion	Rare	Common
Laparotomy	Rare	Rare



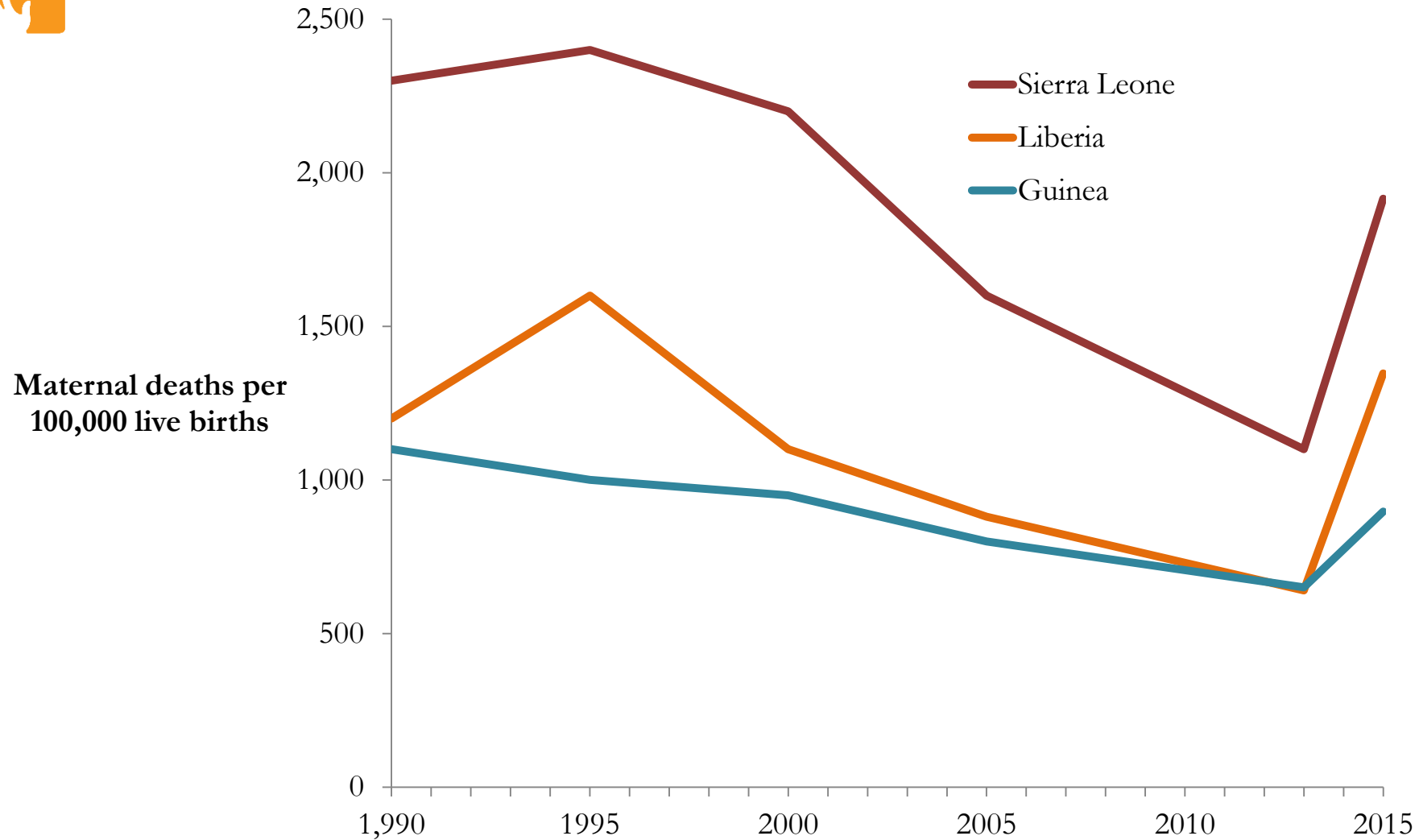
Disruption of Essential Maternal and Child Health Services in Port Loko District, Sierra Leone



Assessment Capacities Project (ACAPS), Sierra Leone Ministry of Health and Sanitation. Ebola Outbreak Impact on Health Service Utilization in Sierra Leone. Freetown, Sierra Leone: ACAPS, 25 March 2015.



Impact of Ebola Epidemic on Maternal Mortality in West Africa



WHO, UNICEF, UNFPA, and The World Bank. Trends in Maternal Mortality: 1990 to 2013. Geneva: WHO, 2014.

Evans DK, Goldstein M, Popova A. Health-care Worker Mortality and the Legacy of the Ebola Epidemic. *Lancet Global Health* 2015; 3: e439-e440.



Liberia





Would you go here?





Pleebo Health Center: Harper, Liberia





TB

- In US: 1 out of 21,276 suffers from TB
- In Haiti: 1 out of 410 suffers from TB
- In Liberia: 1 out of 196 suffers from TB







Koidu General Hospital: Kono, Sierra Leone





Maternity Ward: Before and After





#PovertyMakesYouSick



The “survivors’ tree,” a mango tree outside Maforki ETU, where each discharged patient ties a piece of cloth around a branch to celebrate his or her recovery.

Photo by Rebecca E. Rollins / Partners In Health

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