

“Ebola Infections in the Health Workforce: Lessons Learned for Laboratorians”

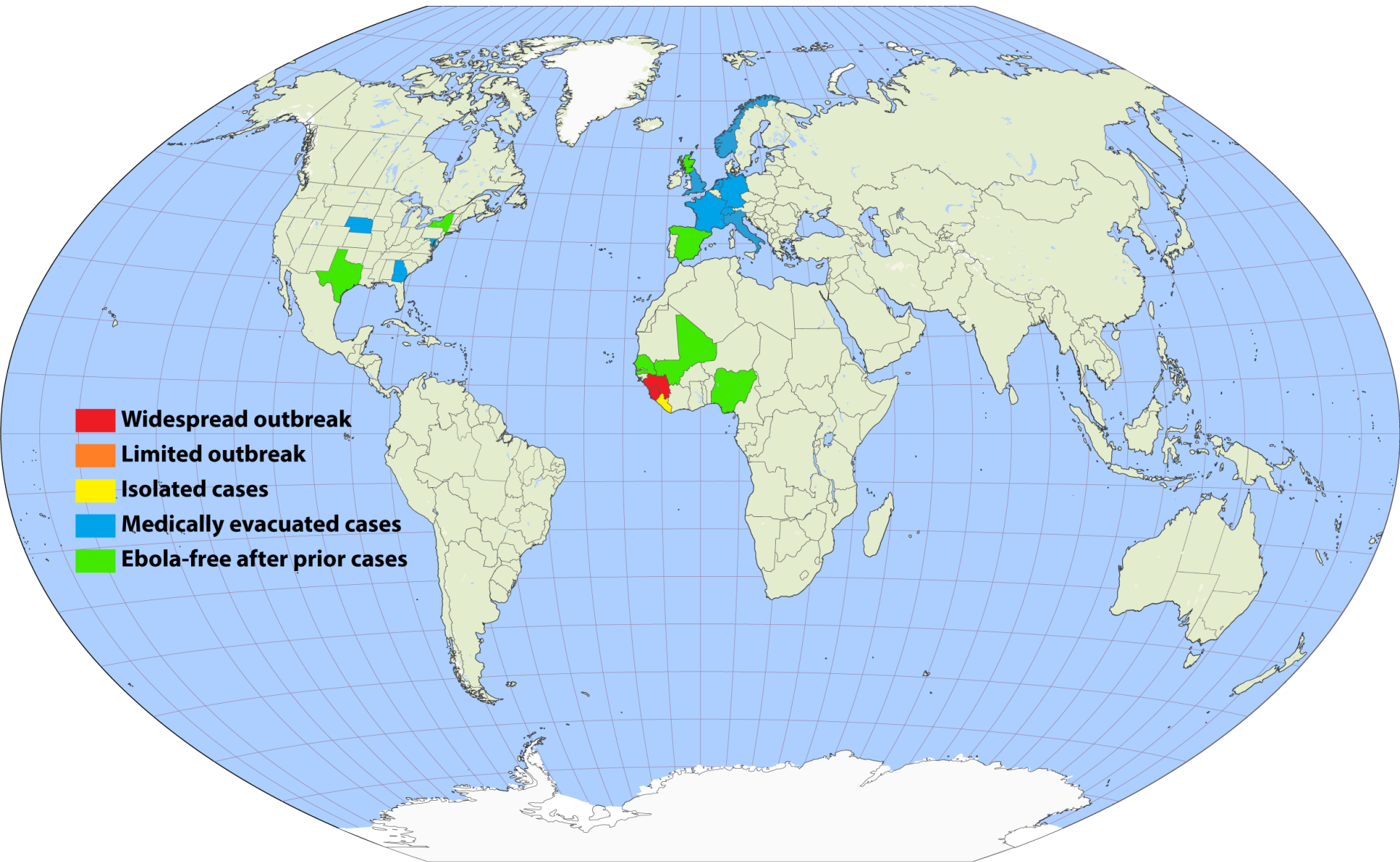
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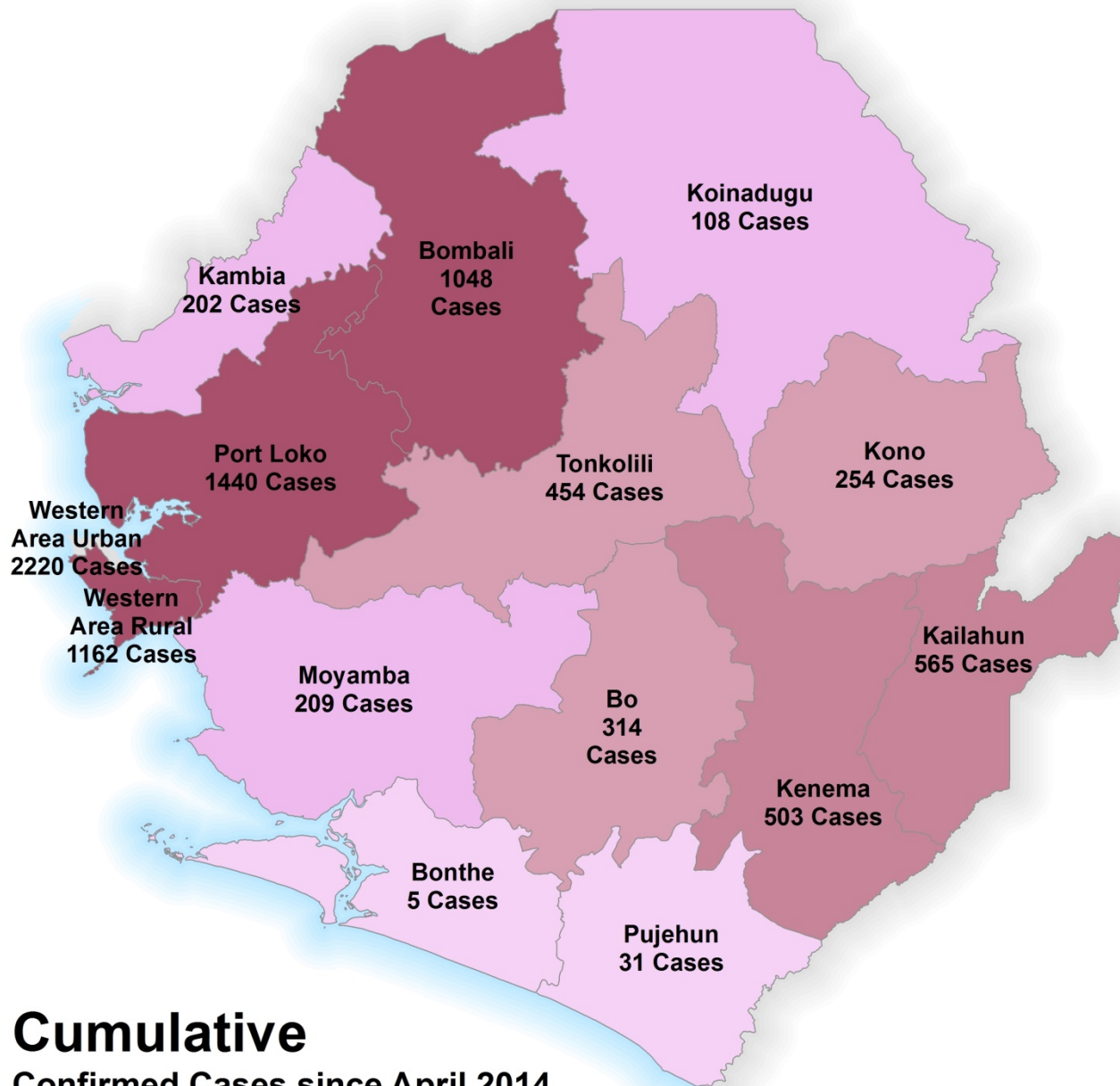
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Director of Hospital and Laboratory

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Cumulative
Confirmed Cases since April 2014

IMPACT

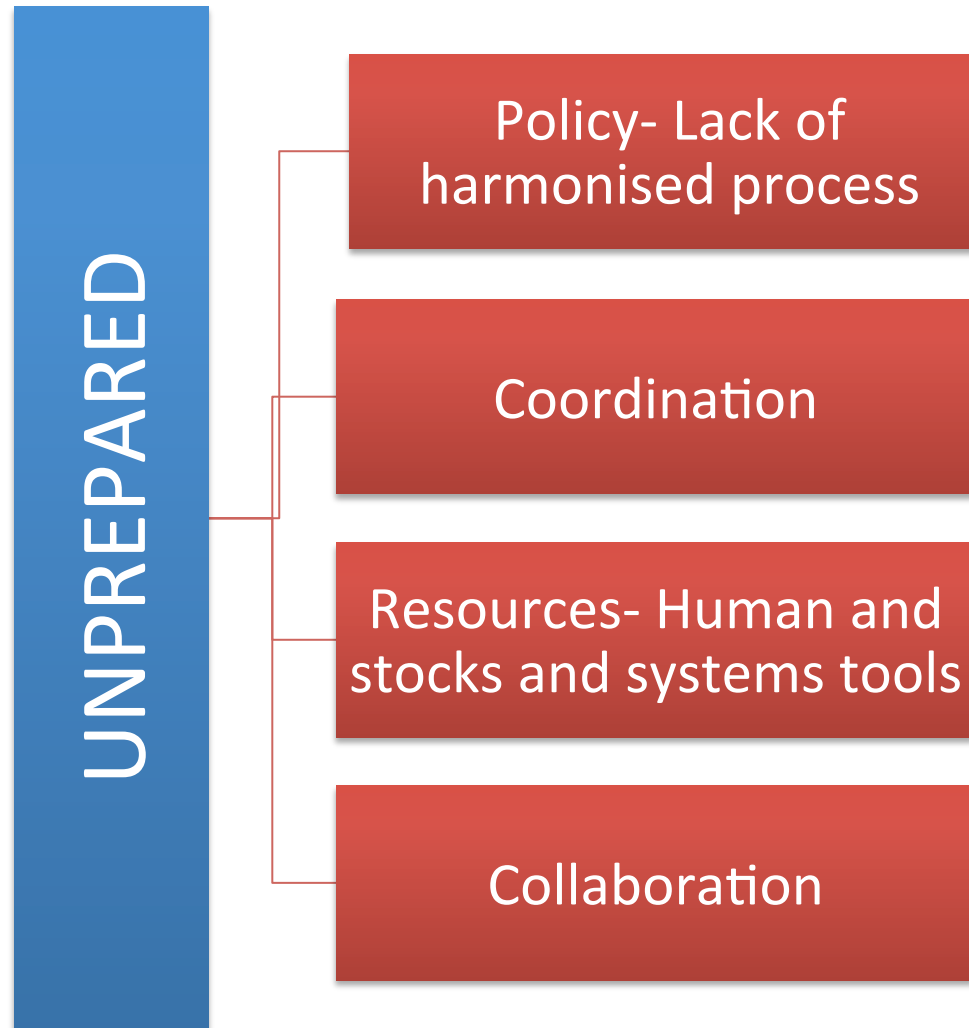
- Sierra Leone's first cases of Ebola Virus Disease (EVD) occurred in the Eastern region of the country
 - By March 2015, all 14 districts had been affected
 - 8,400+ confirmed cases
 - 3,600 Reported deaths
- Health Care Delivery
 - 23% decrease in institutional deliveries;
 - 39% decrease in children treated for malaria,
 - 21% decrease in children receiving a basic immunization (penta3).
 - post-Ebola levels of under-five mortality have returned to 1990 levels.

IMPACT on HEALTH CARE WORKERS

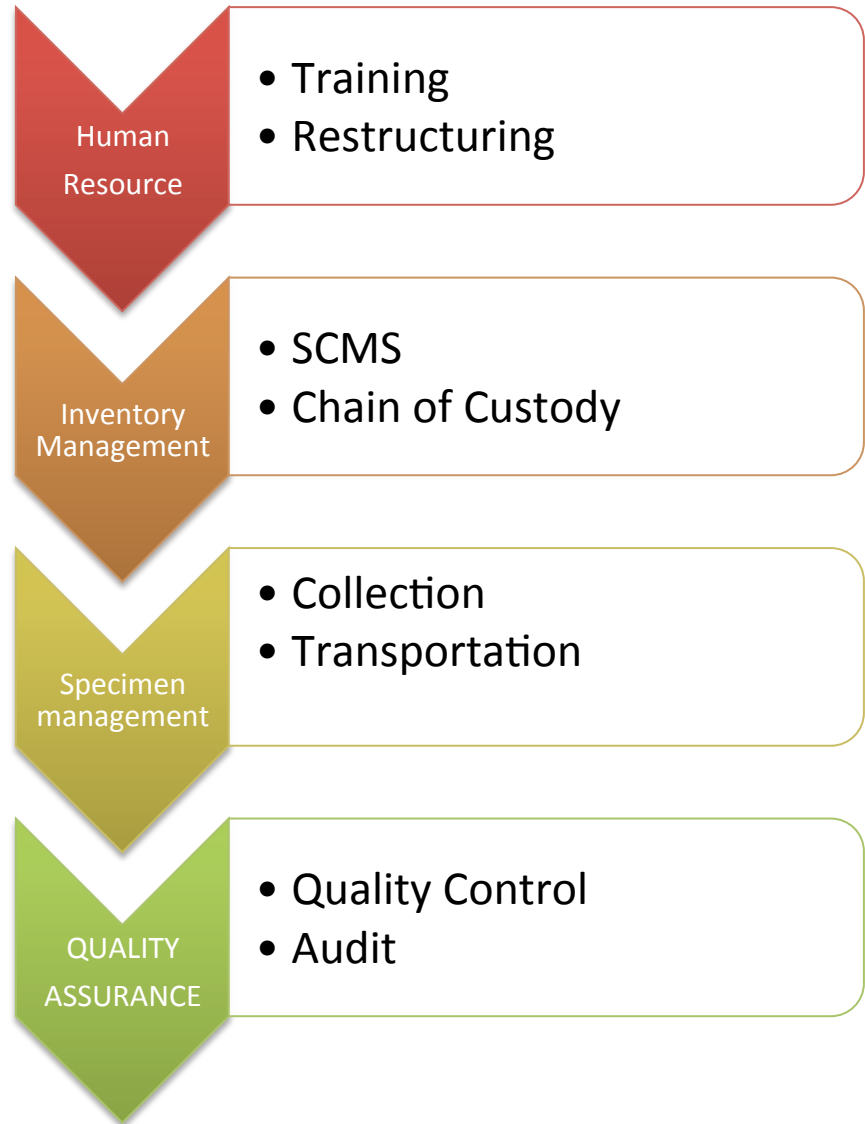
- System Input
 - Identification and laboratory confirmation delays of cases
 - inadequate implementation of Infection Prevention and Control (IPC)
 - Unpreparedness and lack of resources
- Impact
 - 296 EVD infections among health care workers with 221 deaths,
 - **11 among specialized physicians.**
 - **12 laboratorians**
 - **4 - Directly from Ebola specimen collection –Northern Region**
 - **8 - unprotected health services outside duties - Eastern Region**

CHALLENGES

Limited leadership



Establishment of a Central Coordinating Core Organ- National Laboratory Technical Working Group



Role of Laboratory in EVD Response

- *Focus: Shortest TAT possible*

Prompt diagnosis to reduce Ebola transmission by:

- 1. Reduce patient time in holding centre (release beds)*
- 2. Improve case management (treatment)*
- 3. Improve dead body management*
- 4. Monitor epidemic trends*

- **Set Criteria – Develop a Laboratory Manual**

- Stocks and supplies for specimen management – Collection Kit
- Set criteria for establishment of Holding and treatment centers
- Define Human Resource formula
- Define Training needs

NOTIFICATION
(facility/family/DPC)

**Specimen
COLLECTION**

**Specimen
Transportation and
DISTRIBUTION**
Specimen reception and
validation

**LABORATORY
CYCLE**

TEST
QA- QA/PT

COMMUNICATIONS OF RESULT

PRE-ANALYTICAL

- SPECIMEN MANAGEMENT
- COLLECTION
- PACKAGING
- TRANSPORT

ANALYTICAL

- 16 TESTING LABS
- QA

POST ANALYTICAL

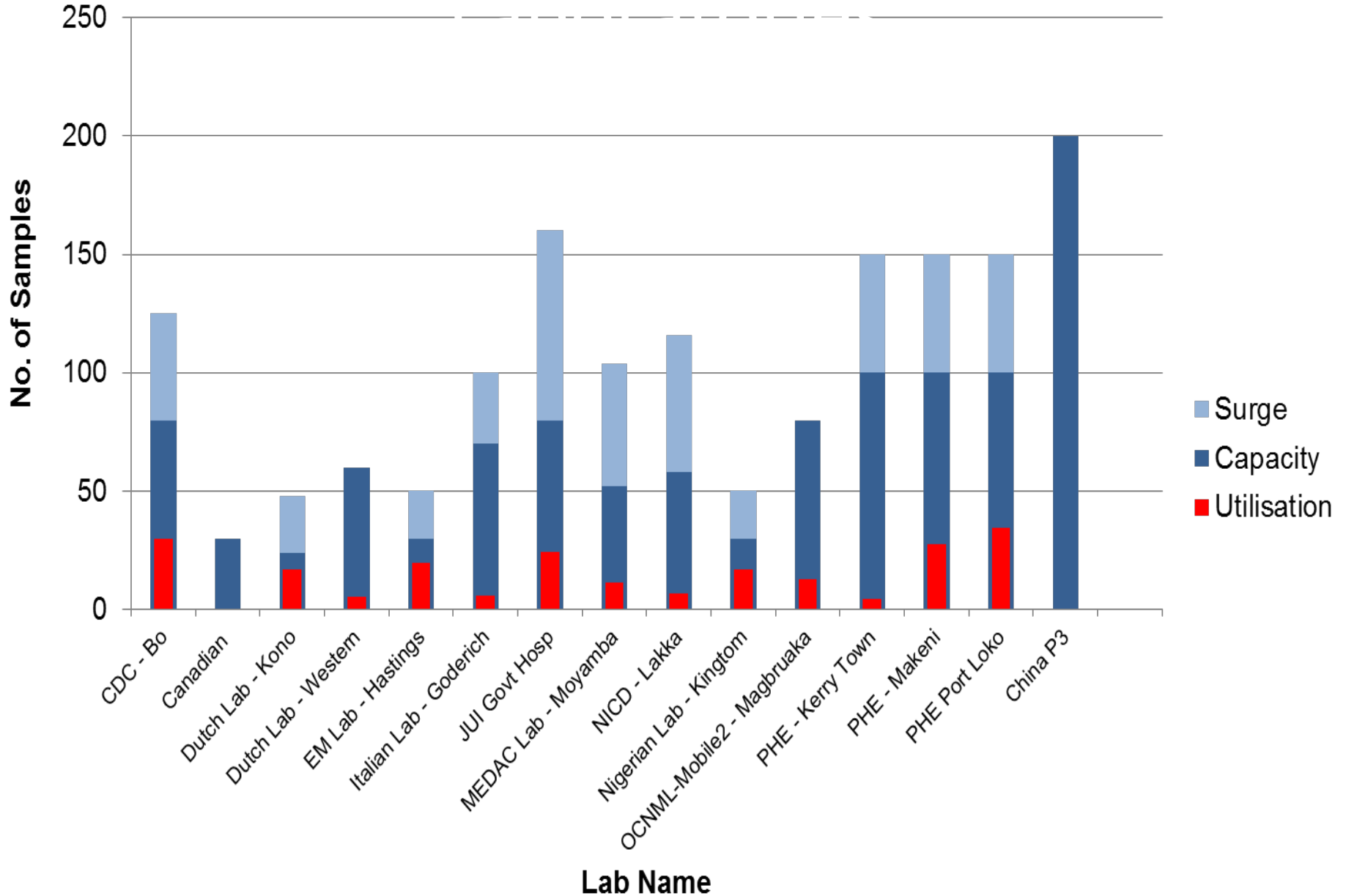
- RESULT DISSEMINATION

DIRECTION OF HOLDING and Treatment unit
CASE MANAGEMENT
SURVEILLANCE/
trend

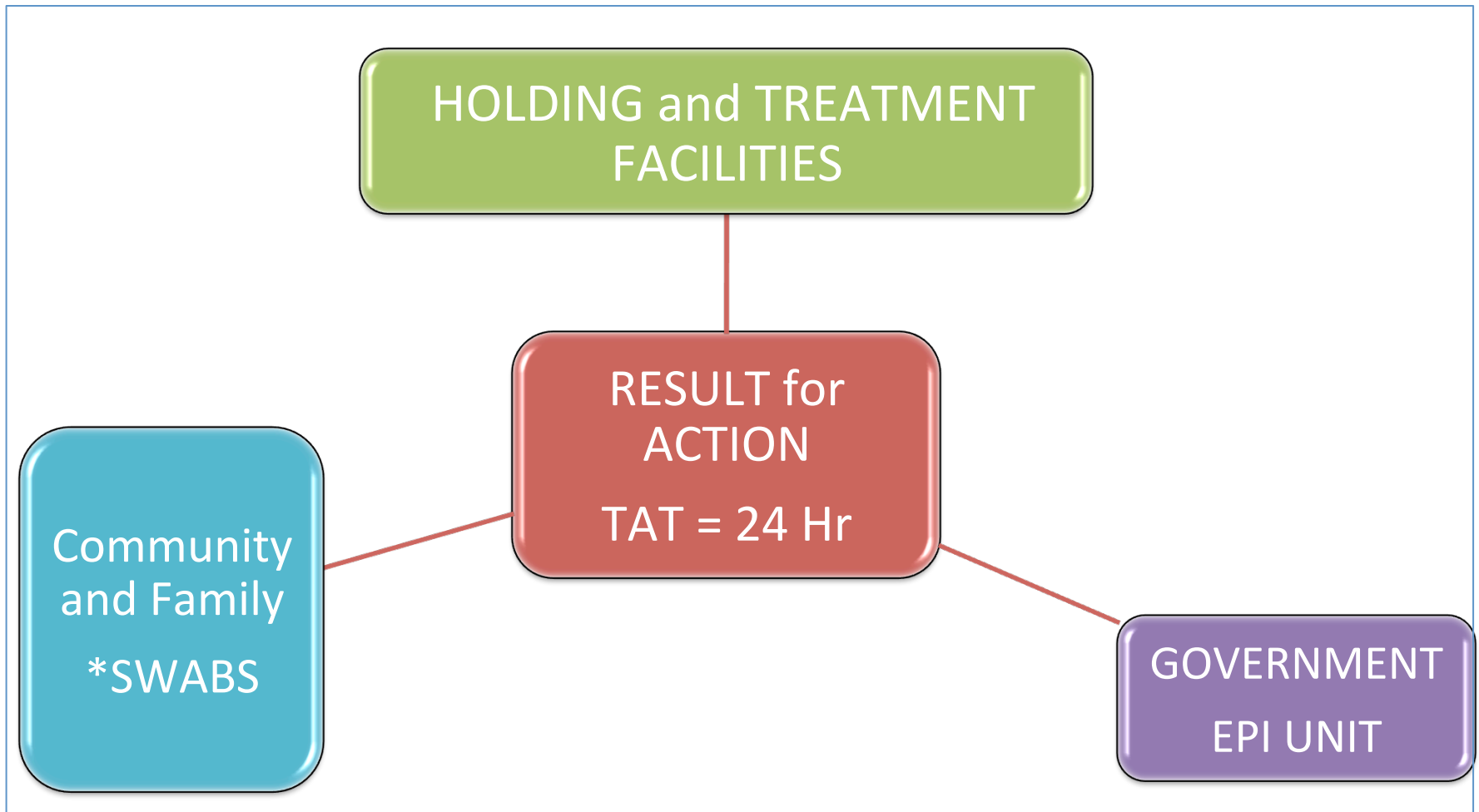
Human Resource restructuring – laboratory staff formula

<u>Facility</u>	<u>Number of Beds</u>	<u>Number of Specimen collectors</u>
Holding and Treatment Centre	Up to 25 beds	2 collectors + 1 supervisor*
	26-50 beds	4 collectors + 1 supervisor
Community	Zone/catchment	Collector + 1 supervisor (Number of staff TBD)
Laboratories	ALL	<ul style="list-style-type: none"> • Expert team (partner specific) • 1or2 Specimen management • 1 Data management linking with facility and command centre leads • 1 key scientist to support analytical phase for future transition

Average daily utilisation for w.c 16 Feb



Establish result loop



Process Flow



Specimen
management



Specimen
transport



Testing



Result for
action

COORDINATION – Country Ownership

ACKNOWLEDGEMENT

MINISTRY OF HEALTH AND SANITATION SIERRA LEONE

Office of the Chief Medical officer

Directorate of Hospital and Laboratory Services

***NATIONAL LABORATORY, SURVEILLANCE AND
EPIDEMIOLOGY TECHNICAL WORKING GROUP***

***Technical support – Association of Public health laboratory
(APHL) and African society for Laboratory Medicine (ASLM)***

CDC- Sierra Leone Ebola Response

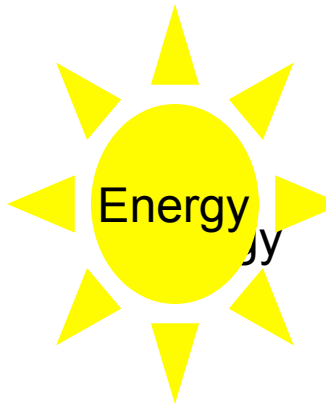
WHO Country Office

German TB and Leprosy Control Program- Sierra Leone

INTEGRATION INTO HEALTH SECTOR PLAN for SUSTAINABLE
OUTBREAK RESPONSE

TRANSITION PLAN

Core Systems and structures set at minimum standards for Laboratory Services



HR



Water



Infrastructure



health and
safety



END-STAGE CHALLENGES CHALLENGES

COORDINATION



Critical Transition Consideration Outline

1. Geographic coverage
2. Transition of infrastructure – (minimum standards)
 - a. Technology suitability
 - a. Defining testing algorithm – RDT/PCR
 - b. Cost implication- **(UTILITIES AND CONSUMBALES)**
 - c. Sustainability (, maintenance)
3. Transition- Human Resource Capacity Building -
 - a. Recruitment of national team to increase pool
 - b. Training plan
4. Quality Assurance
 - a. SOP collation
 - b. EQA/PT performance
 - c. Instituting SLIPTA SLAMTA