Ministry of Heath and Sanitation
Government of Sierra Leone

World Health
Organization

CONDUCT OF POINT PREVALENCE SURVEY ON ANTIBIOTICS USE IN HOSPITALS

SIERRA LEONE'S EXPERIENCE

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National AMR Focal Person

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Presentation outline

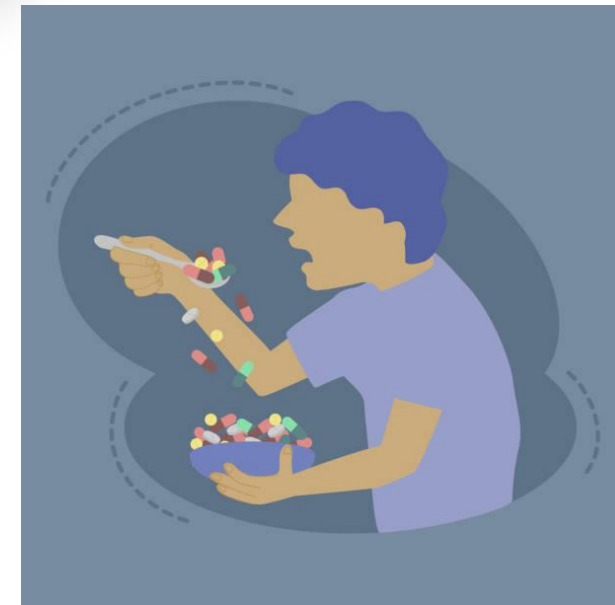| WHAT WE DID? | → | WHY ? | → | HOW ? | → | SUMMARY |

What we did…

Conducted National Point Prevalence Survey on antibiotic use in hospitals

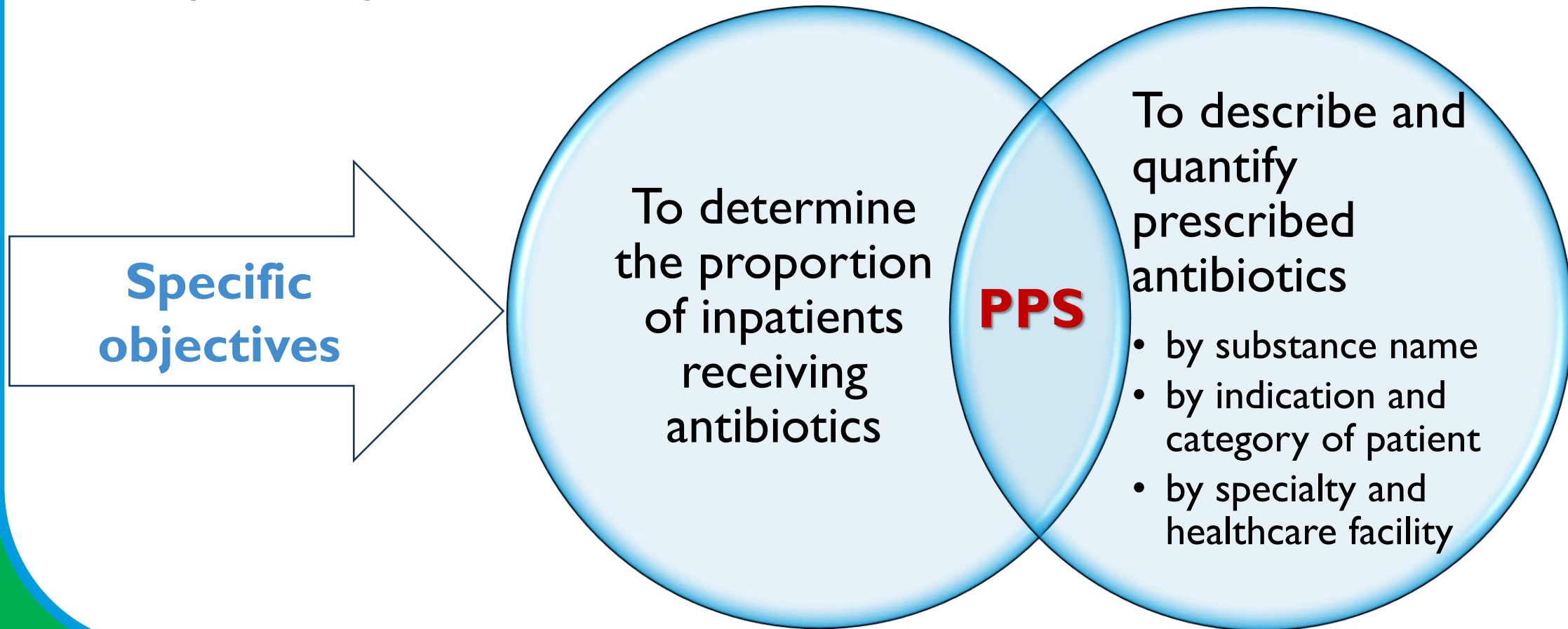- 28 hospitals
  - 26 hospitals (2021)
  - 2 hospitals (2022)

"Snapshot" of antibiotic use at one point in time

Prevalence of antibiotic use

Why did we do PPS…

Main Objective: to estimate the prevalence of antibiotic use in selected hospitals in order to inform interventions aimed at improving rational antibiotic use

Specific objectives

To determine the proportion of inpatients receiving antibiotics

PPS

To describe and quantify prescribed antibiotics

- by substance name
- by indication and category of patient
- by specialty and healthcare facility

Why did we do PPS...

To improve the appropriate use of antibiotics...

Understand the situation

Where do you stand?

? ? ? ?

Baseline

Intervene & evaluate

PLAN DO

ACT CHECK

Follow-up

Stewardship
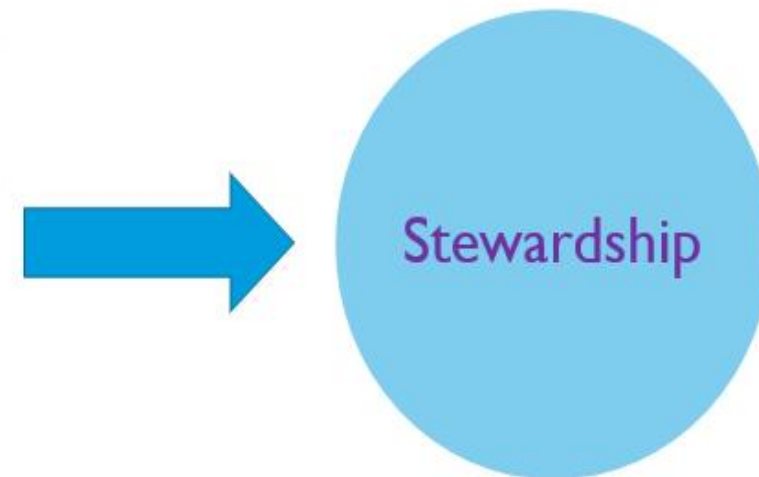
Why did we do PPS...

Optimize the use of antimicrobials along the Product value chain

R&D

Regulation Manufacturing

Selection

Procurement & Supply

Distribution

Prescribing Medicines & Diagnostics

PHARMACY

Dispensing

Appropriate use by end user

R&D

Stewardship

Using WHO PPS Methodology

Sites Selections

- Stratified random sampling (33 HFs) and convenient sampling (2 HFs)

- 33 hospitals selected (based on *DPPI facility* list) (2021)

  - 26 included in survey

  - 6 facilities were non-respondent

  - 1 hospital excluded -> No hospitalized patients at the time of the survey

- Additional 2 included – Fleming Fund supported-sites (2022)

Survey implementation

  - From September 2021 to June 2022

  - Surveys conducted by one national team

  - Data collected on paper-based forms and entered in the WHO PPS platform

WHO Methodology for Point Prevalence Survey on Antibiotic Use in Hospitals

Version 1.1

World Health Organization

How?...

Phase 1

Coordination & Planning

- Identified national coordinator and team
- Selected hospitals
- Sought buy-in from hospital management and staff
- *Formally informed facility managers*
- Sought ethical clearance
- Trained personnel
- Prepared all materials
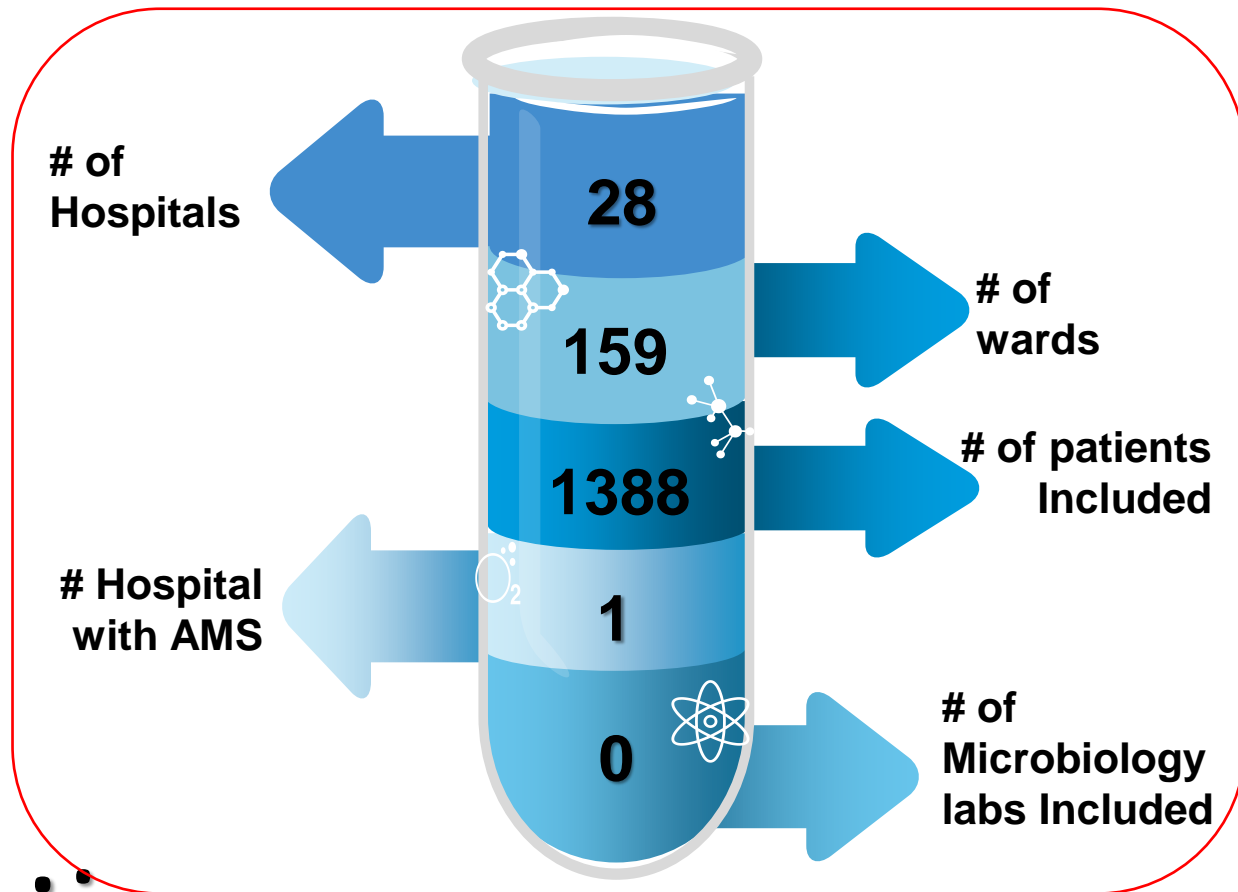- Set timelines

Phase 2

The Survey

- Provide logistics
- Collected data
- Data entry

Phase 3

Analysis and reporting

- Data cleaning
- Data analysis
- Report writing
- Dissemination of preliminary results

Summary Results – Hospitals Overview

Type of hospital	N (%)
Primary	12 (43%)
Secondary	14 (50%)
Tertiary	2 (7%)

Hospital ownership	N = 28 (%)
public	14 (50%)
private, not-for-profit	10 (36%)
private, for-profit	4 (14%)

Included patients	N = 1388
Median by hospital (range)	41 (1-180)

# of Hospitals: 28
# of wards: 159
# of patients Included: 1388
Hospital with AMS: 1
of Microbiology labs Included: 0

Results: Patients' characteristics

Age and gender

Patients	N = 1388
Age	
Median (range)	**20 (1-97)**
Under 5 (<5)	488 (35.2%)
Children (5-14)	84 (6.1%)
Youths (15-24)	218 (15.7%)
Adults (25-64)	464 (33.4%)
Above 65 (>65)	79 (5.7%)
UNK	55 (4.0%)
Gender	
Female	835 (60.2%)
Male	550 (39.6%)
Unknown	3 (0.2%)

## Risk factors / comorbidities (N= 1388)
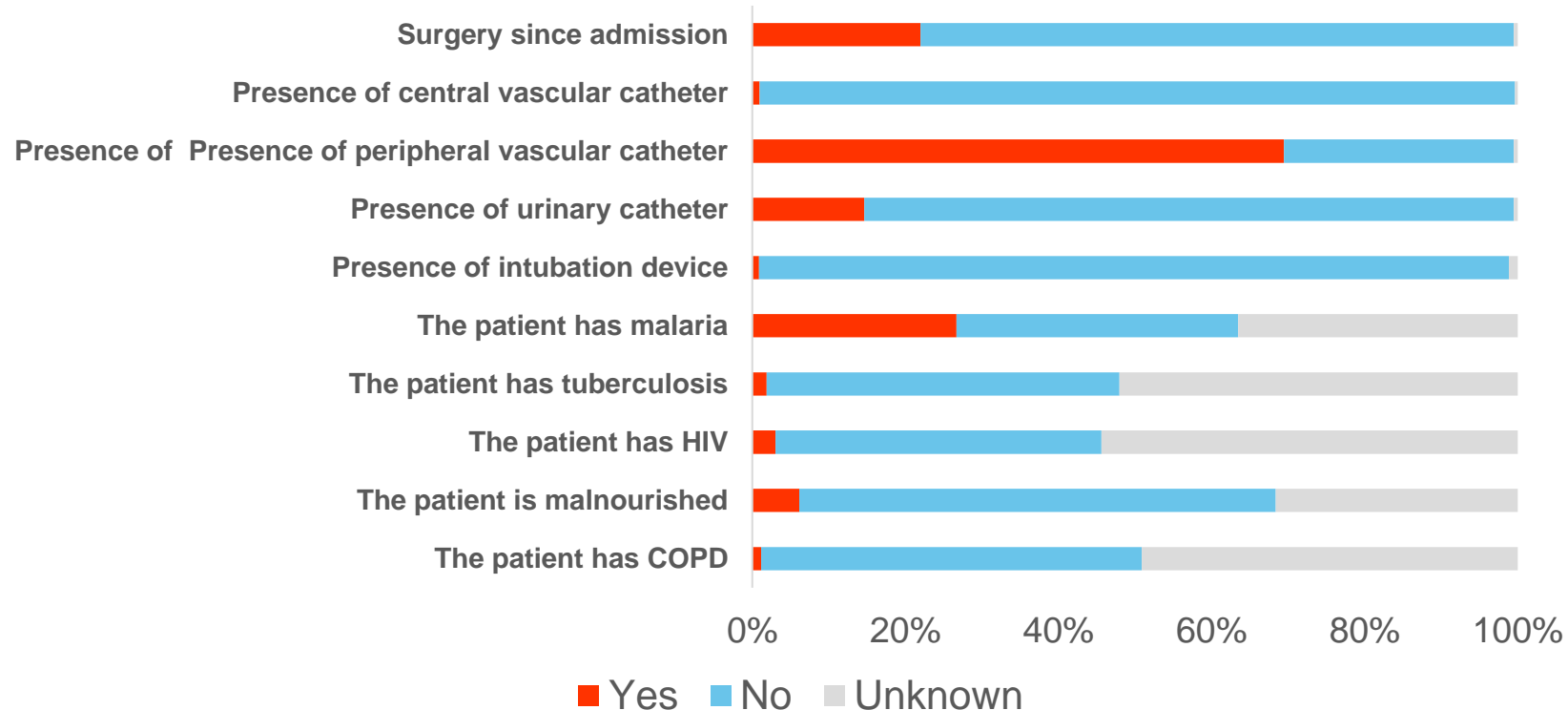
Results: Prevalence of patient on antibiotic therapy

Prevalence of patient on antibiotics by types of hospital
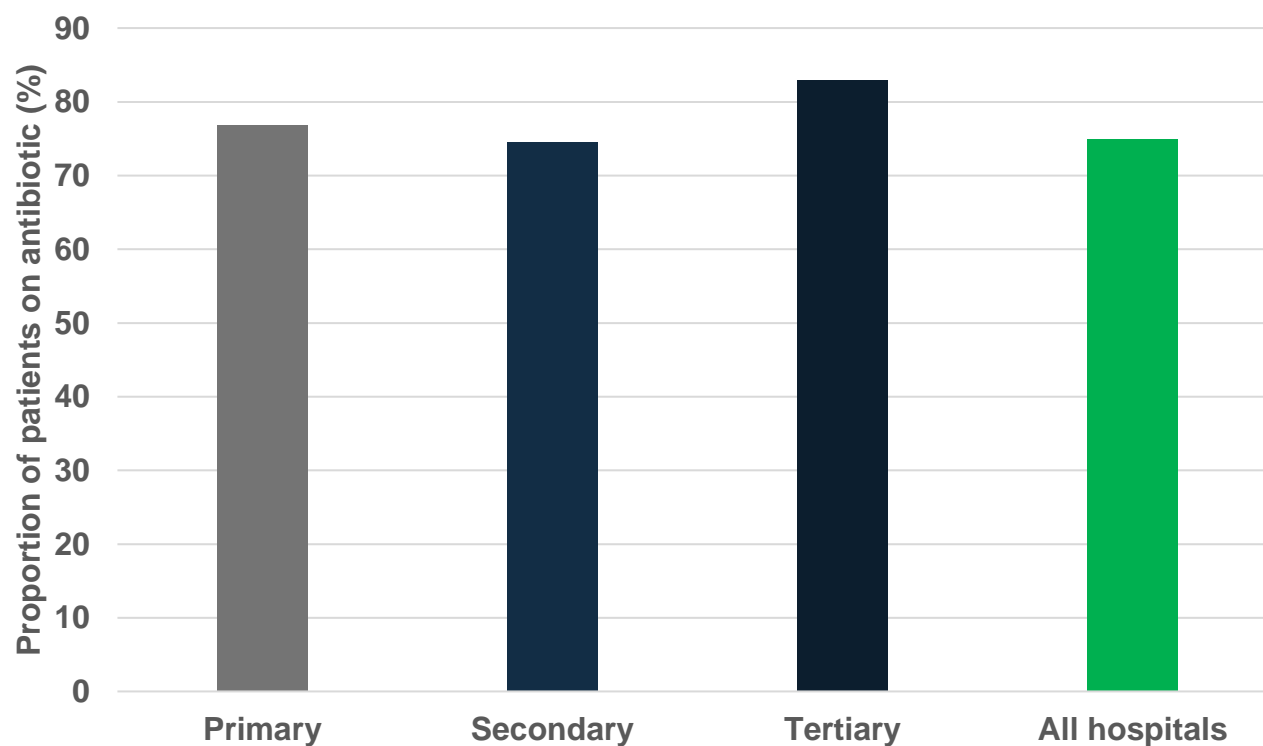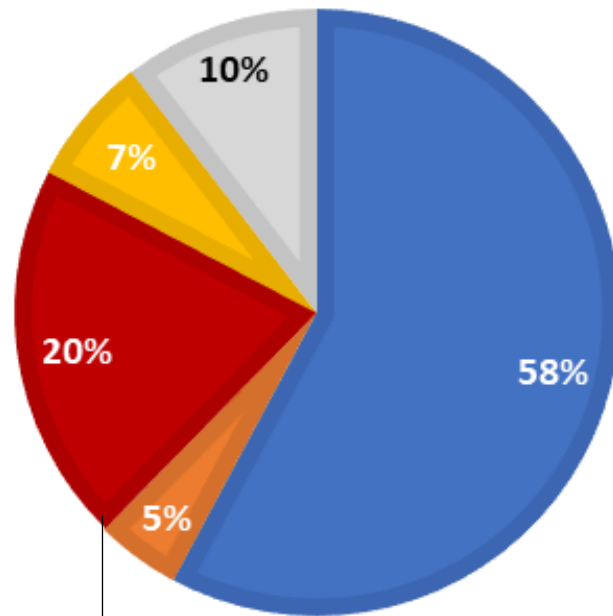

- Of 1388 included patients, **1040 patients were on antibacterial therapy** at the time of the survey

  - **Overall, AMU prevalence = 75%**

- 747 (54%) patients were receiving more than one antibiotic

Results: Prevalence of patient on antibiotic therapy by hospital
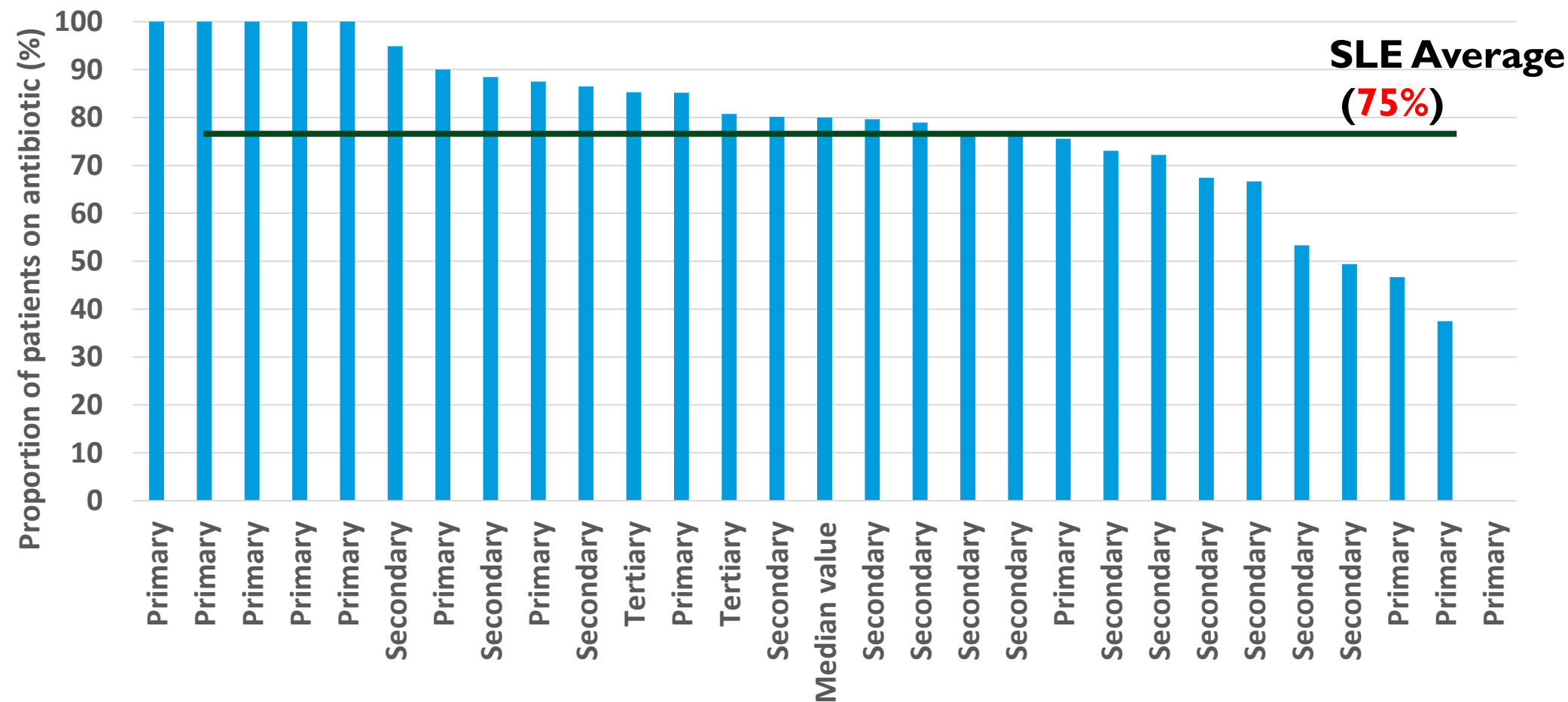
Results: Indication type

Daignosis	N=680	%
Pneumonia	200	29
Unknown	114	17
Gastrointestinal infections	71	10
Cellulitis, wound, deep soft tissue	57	8
Sexually transmitted disease	51	8
Clinical sepsis	46	7
Obstetric or gynaecological infections	23	3
Acute bronchitis	22	3
Infections of the central nervous system	19	3
Septic arthritis, osteomyelitis	13	2
Symptomatic lower urinary tract infection	10	1
Other	54	8

Results: Antibiotics prescribed
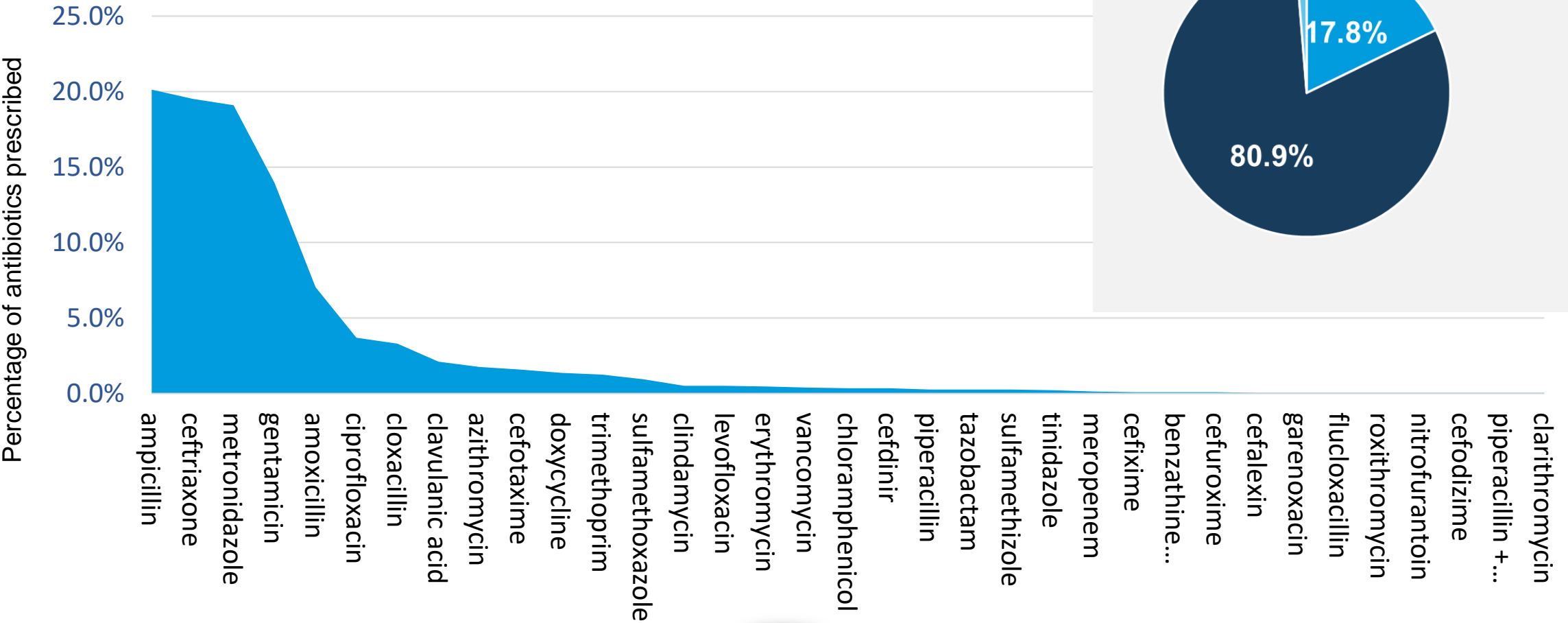
Results: Antibiotic Use by AWaRe categorization
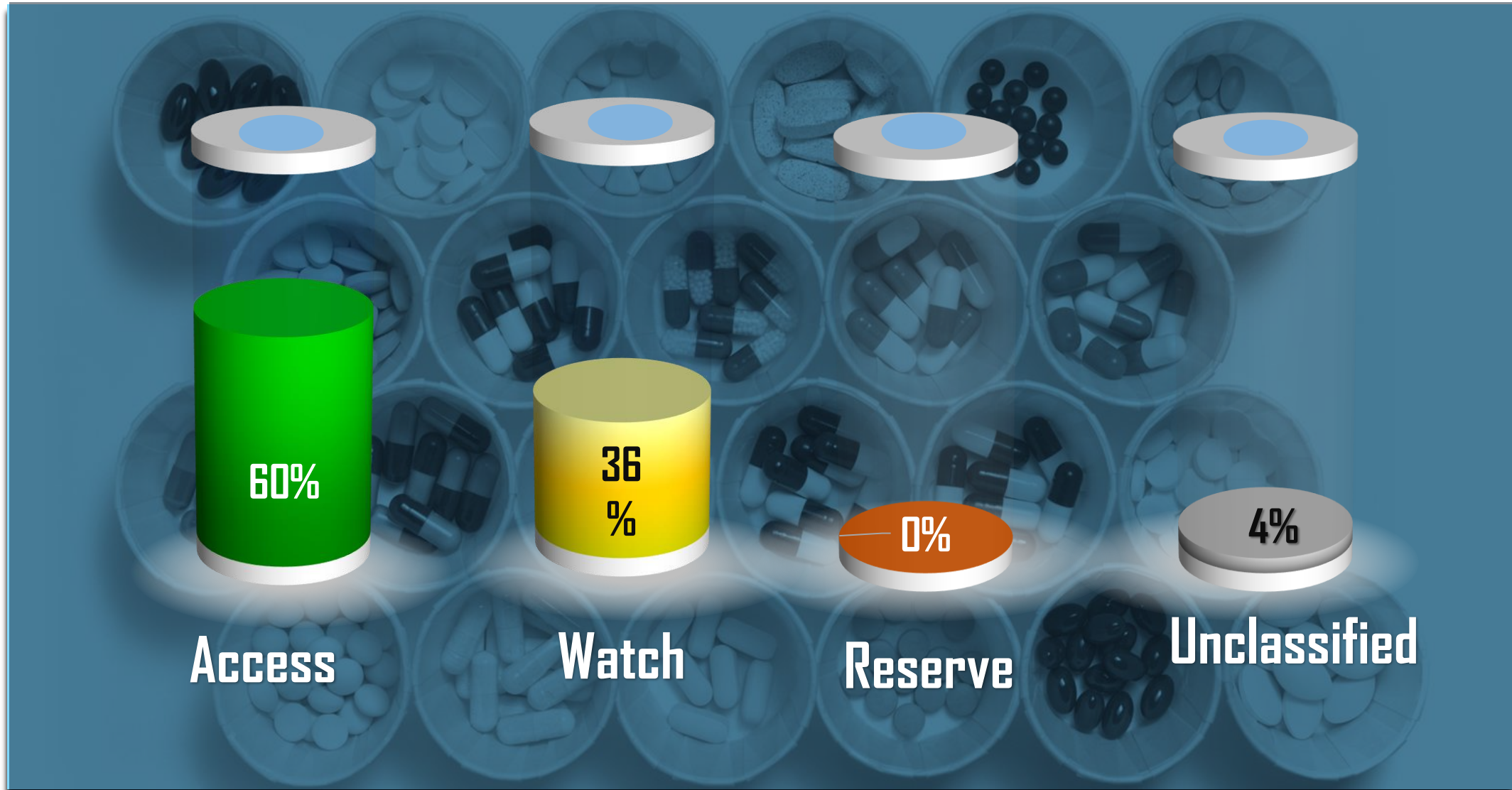
Conclusion

❑ High prevalence of antibiotic use in hospitals in Sierra Leone

❑ Majority of the antibiotics prescribed fall under the "ACCESS" group

❑ Frequently prescribed antibiotics are: ampicillin, ceftriaxone, metronidazole, gentamicin, and amoxicillin

❑ High proportion of parenteral antibiotics

❑ Empirical treatment is the mainstay

Implication for AMR

❑ **Overuse** of **antibiotics** in hospitals in Sierra Leone

  ❑ Possibly a key driver of AMR in Sierra Leone

❑ AMR Stewardship program needed

  ❑ Secondary and tertiary healthcare facilities

  ❑ Include microbiology capacities and IPC

Acknowledgement

Health Facility
MSs/Directors/Managers/
In-Charges

Data Collectors

Tenki!

Thanks!