

A stylized graphic on the left side of the image. It features a vertical orange rod with a green snake coiled around it, resembling a caduceus. The rod has a solid orange circle at the top. Several colorful, glowing rings in shades of purple, green, yellow, and blue orbit around the central rod. The background is a gradient of orange and yellow, with a large, faint, stylized figure of a person in the upper right corner.

Caribbean  
Public Health  
Agency

**CARPHA**

Preventing disease  
Promoting and protecting health

# CARPHA STRATEGIES AND PROGRAMMATIC WORK



Strategic  
Priorities

Integrated  
Surveillance  
Strategy

Programmatic  
Work

- Regional Public health agency serving 29 member states .
- **AMR work fall under**
- **S.P.2.2** CMS enabled to prevent, respond and manage public health through a coordinated approach to implementation of the Global Health Security Agenda (GHSA) Roadmap for the Caribbean Region.
- **S.P.4.5** Increased availability of strategic information, through research and data management, to inform health policy and programmes in Member States

## CARPHA Medical Microbiology Laboratory (CMML)

- Regional Reference and referral testing accredited lab
- Testing services provided to 26 CMS through National Public Health Laboratories (Vaccine Preventable, Respiratory, Vector borne and Foodborne Diseases) including
  - Whole Genome Sequencing
  - Virus Isolation
  - **AMR**

# Status of AMR activities in Caribbean

- CARPHA, Hospital and Public health laboratories in many countries conduct AMR testing on ad hoc basis:
  - Hospitals: mainly non- enterics
  - *Public Health Laboratories* : mainly enterics (*Salmonella* & *Shigella*)
- No regional established AMR surveillance program
- No routine data collection, reporting & analyses
- Surveys (2009, 2013, 2022) 13-15 CMCs conduct ad hoc AMR testing
- Pathogens AMR tests performed on
  - Enterics (previously)
    - *Salmonella*, *Shigella*,
  - Non Enterics
    - *Streptococcus pneumoniae* & *Haemophilus influenzae*
    - *Neisseriae gonorrhoea*
    - *MRSA*, *ESBLs*

# Timeline 2014-2022

CARPHA and Public Health England Tackle the Threat of Antimicrobial Drug Resistance

• 2014

Establishment of a regional reference service to provide reliable automated antimicrobial susceptibility data for the Caribbean: System description and early findings

• 2017-2019

WAAW Lets Unite to Preserve Antimicrobials

• 2020

COVID-19 Pandemic

Antibiotic stewardship in the Caribbean: Developing the role of pharmacists through a regional training program

• 2016-2018

Caribbean multi-centre study of *Klebsiella pneumoniae*: whole genome sequencing, antimicrobial resistance and virulence factors

• 2019

Antimicrobial Resistance in the Caribbean

• 2022



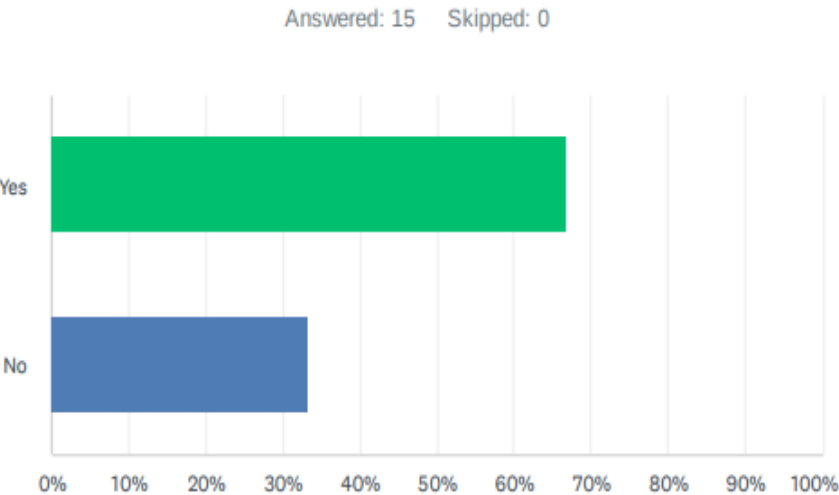
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# Regional survey, July 2022

Q10 Is your laboratory able to conduct AMR testing and reporting?



| ANSWER CHOICES        | RESPONSES |    |
|-----------------------|-----------|----|
| Yes                   | 66.67%    | 10 |
| No                    | 33.33%    | 5  |
| Total Respondents: 15 |           |    |

## CMS requesting AST in last 5 yrs

|                                  |
|----------------------------------|
| Anguilla                         |
| Barbados                         |
| Bahamas                          |
| Belize                           |
| Bermuda                          |
| Cayman Islands                   |
| Grenada                          |
| Jamaica                          |
| Saint Lucia                      |
| Saint Vincent and the Grenadines |
| Trinidad and Tobago              |
| Turks and Caicos                 |

|                        | 2018-2020        | 2021-Present     |
|------------------------|------------------|------------------|
| TAT                    | 7-14 days        | 2-7days          |
| Sample Throughput      | 30 (-18hrs)      | 192 (-1hr)       |
| Number of Organisms    | 1000+            | 3000+            |
| AMR Resistance Profile | CLSI Update 2018 | CLSI Update 2021 |



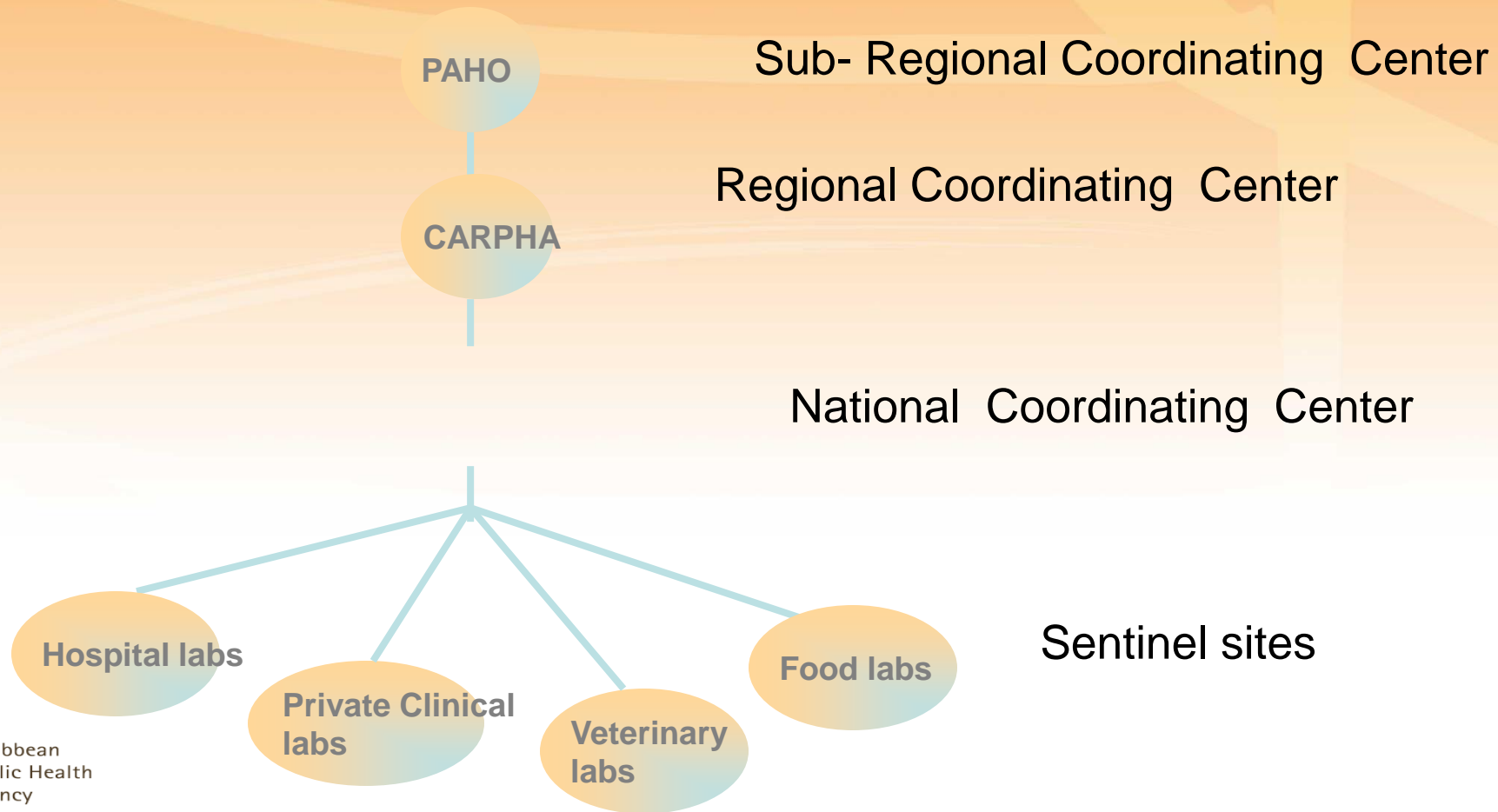
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# AMR SURVEILLANCE is part of Integrated Foodborne disease surveillance at CARPHA

- CARPHA : promoting the one health integrated approach , integrating epi, lab, env health and and vert aspects of FBD surveillant since 2005
- CARPHA & PAHO: multiple regional cross-cutting workshops on integrative FBD & AMR
- Step-wise training of Caribbean countries in food safety with PAHO.
- Provisions of molecular testing for foodborne pathogen genotyping.
- Stakeholder mtgs to design and implement National Action Plans to address AMR.
- Governments and CARICOM Secretariat: collaboration between public health, laboratory, medicine, pharmacology, veterinary medicine, policy and agriculture.
- Countries are addressing gaps in their laboratory capacity and surveillance systems, to incorporate AMR genotyping and sequencing.
- Countries are developing Plans of Action for Treatments to comprehensively address drug resistance in HIV, Vector-borne diseases and foodborne disease bacteria

# Proposed Integrated AMR surveillance



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# Challenges

- Political will support
- Coordination, Communication, data sharing
- Sectoral and agency integration
- Funding & HR
- Prioritization of AMR
- Data on impact and burden
- Establishing regional AMR surveillance