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Public Health  
Agency

**CARPHA**

Preventing disease  
Promoting and protecting health

# Importance of Data Quality for Laboratory Services

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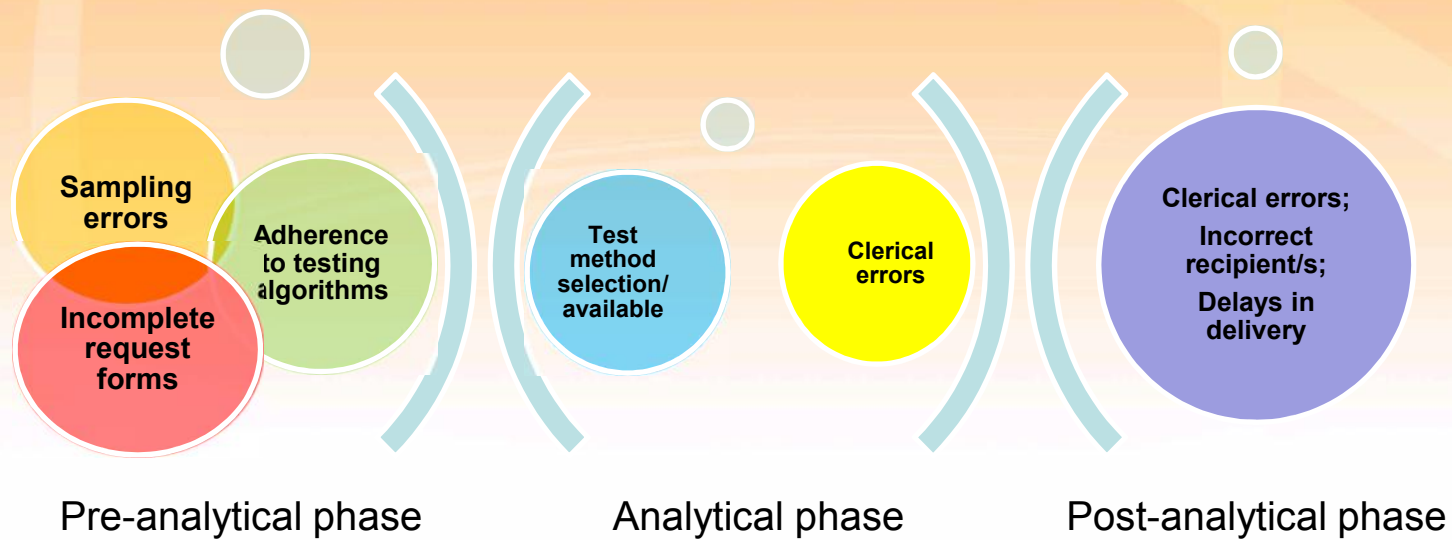
# Uses of Laboratory Data

- Case management
- Surveillance and Response to pathogens in circulation; emerging and re-emerging
- Development of public health policies
- Rationalization of budgetary allocations
- Research

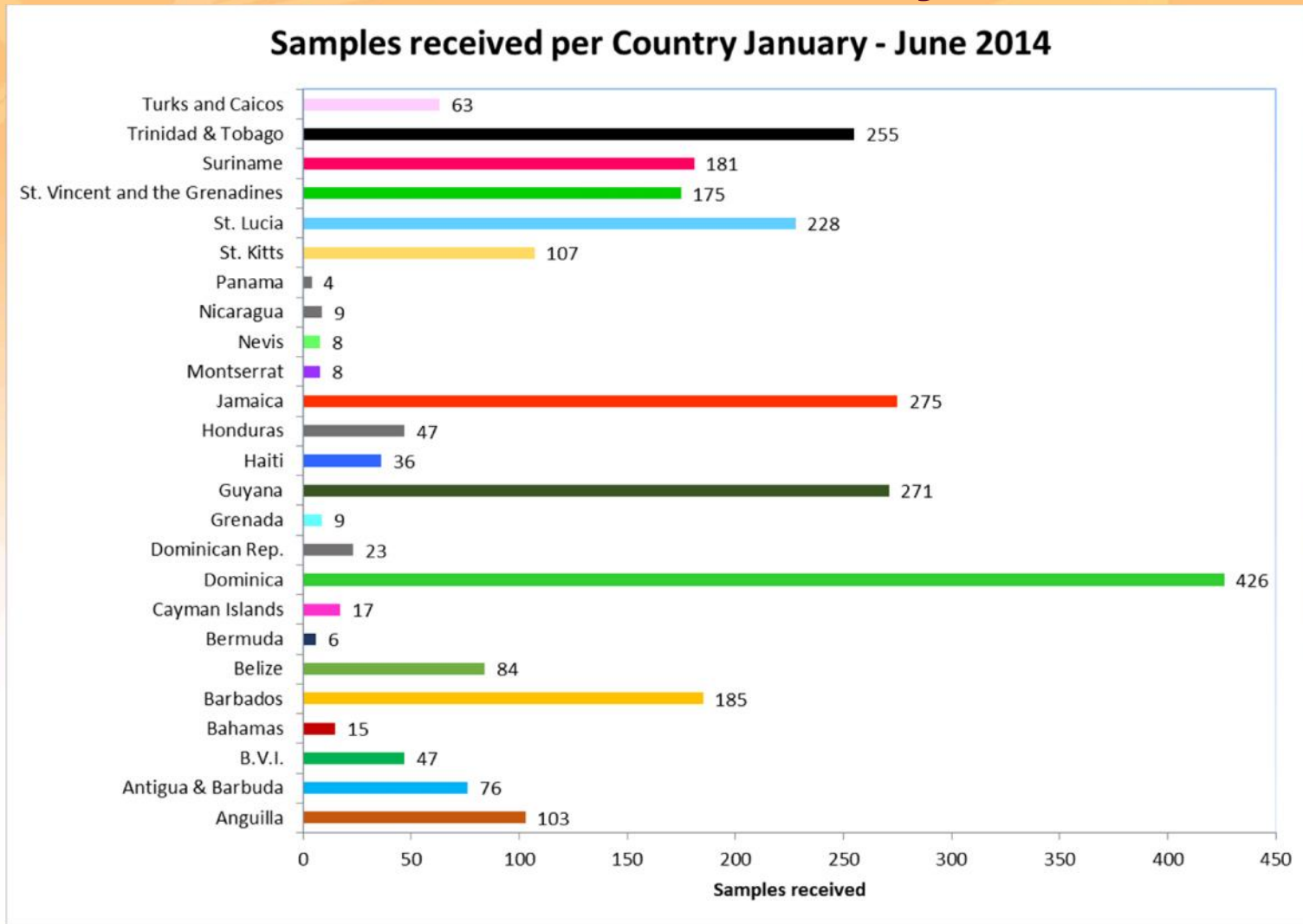


# Importance of Quality Systems

- Quality of laboratory processes has a direct impact on the quality of surveillance data generated



# Access to CARPHA Laboratory Services



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# CARPHA Laboratory Request Form

**1. Patient Information**  
 Last Name \_\_\_\_\_  
 First Name \_\_\_\_\_  
 Patient ID \_\_\_\_\_  
 Gender  M  F Age \_\_\_\_\_ years  months  
 Date of Birth \_\_\_\_\_

**2. Referring Doctor**  
 Name: \_\_\_\_\_  
 Reporting Address: \_\_\_\_\_  
 Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

**3. Provisional Diagnosis, Additional Notes<sup>1</sup>**

**4. Food/Animal/Environment Sample Details (if relevant)**  
 Specimen ID \_\_\_\_\_  
 Name of food/env sample \_\_\_\_\_  
 Where specimen(s) collected \_\_\_\_\_  
 Outbreak  Traceback  Survey  Other

**5. Case/Specimen Status**  
 Single case  Outbreak  Survey  Unknown

**6. Date of Onset of Illness**  
 \_\_\_\_\_

**7. Outcome**  
 Hospitalized?  Y  N  DK  
 Died?  Y  N  DK

**8. Signs and Symptoms**  
 Fever → Temp: \_\_\_\_\_ → Onset: \_\_\_\_\_  
 Rash → Location: \_\_\_\_\_ → Onset: \_\_\_\_\_  
 Pain → Location \_\_\_\_\_  
 Hemorrhagic symptoms → describe \_\_\_\_\_  
 Altered mental state  Convulsions  Jaundice  
 Chills  Coryza  Neck stiffness  
 Circulatory collapse  Cough  Lymphadenopathy  
 Conjunctivitis  Diarrhoea, Acute  Kernig's sign  
 Chronic Conditions  Diarrhoea, Chronic  Paralysis  
 Autoimmune disease  Failure to thrive  Respiratory, Upper  
 Connective tissue disorder  Genital discharge  Respiratory, Lower  
 Lymphoproliferative disorder  Genital lesions  Vomiting  
 Transplant recipient/donor  Hepatomegaly  Weakness of limbs  
 Immunocompromised  HIV +ve  Weight loss  
 Other → specify \_\_\_\_\_  
 → ART Drug Info. \_\_\_\_\_

**9. Syndrome Classification**  
 AFP  Fever & Rash  
 Gastroenteritis  Fever & Respiratory or  
 Fever & Hemorrhagic Acute Respiratory Infection  
 Fever (undifferentiated)  Fever & Neurologic

**10. Immunization History**  
 BCG:  Y  N  dd mm yy MR:  Y  N  dd mm yy  
 DPT:  Y  N  dd mm yy Polio:  Y  N  dd mm yy  
 HBV:  Y  N  dd mm yy YF:  Y  N  dd mm yy  
 MMR:  Y  N  dd mm yy Other\*:  Y  N  dd mm yy  
 \*specify \_\_\_\_\_

**Physician / EHO Use**

	Specimen 1	Specimen 2	Specimen 3
*Type of Specimen			
Date Specimen Collected			
Lab Test(s) Requested			
Date Received at Nat Lab			
Nat Lab Specimen ID			
Test(s) Performed			
Date(s) Tested			
Laboratory diagnosis			
Date Referred to CARPHA			
Name of Testing Lab			

Approved by (Testing Lab): \_\_\_\_\_ Date: \_\_\_\_\_

Date of Onset of Illness (DOO)

Clinical signs and symptoms

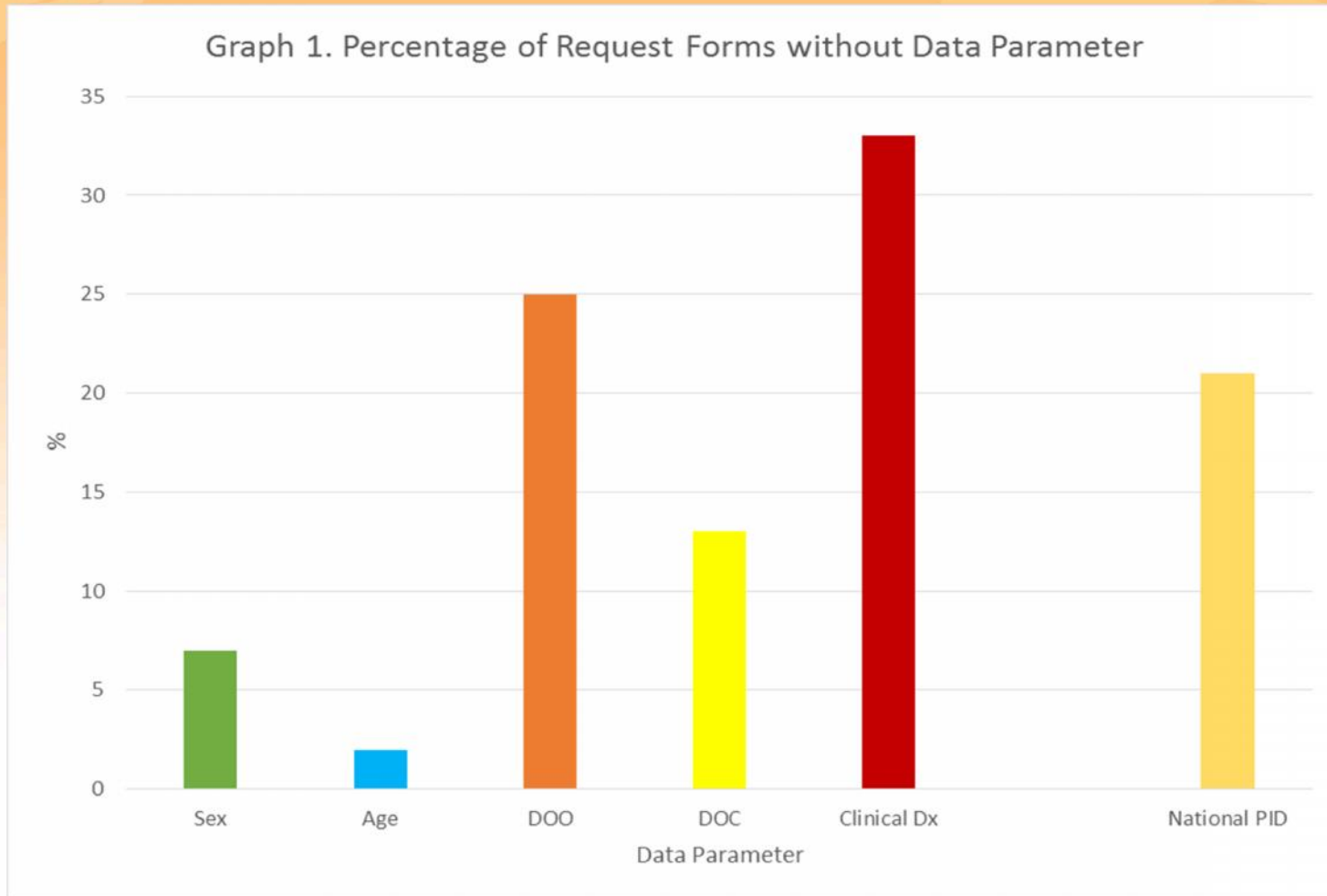
Date of Collection of Sample (DOC)

Results of tests performed by referring laboratory



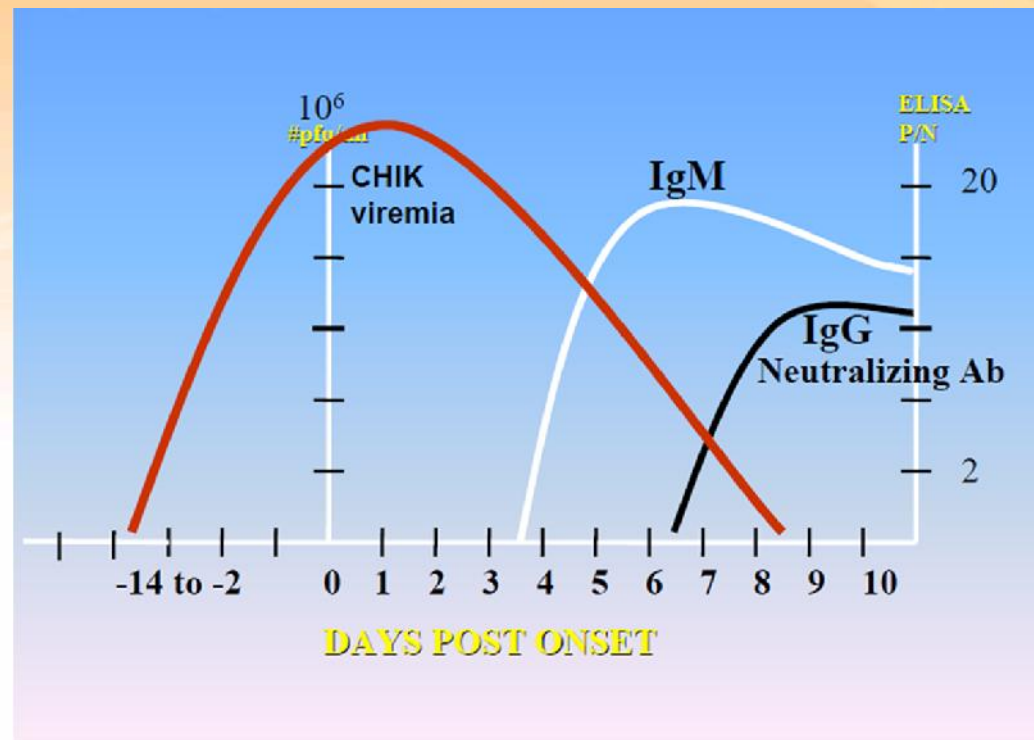
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# Review of Regional Data Jan-Jun 2014



# Key parameters used by the Laboratory

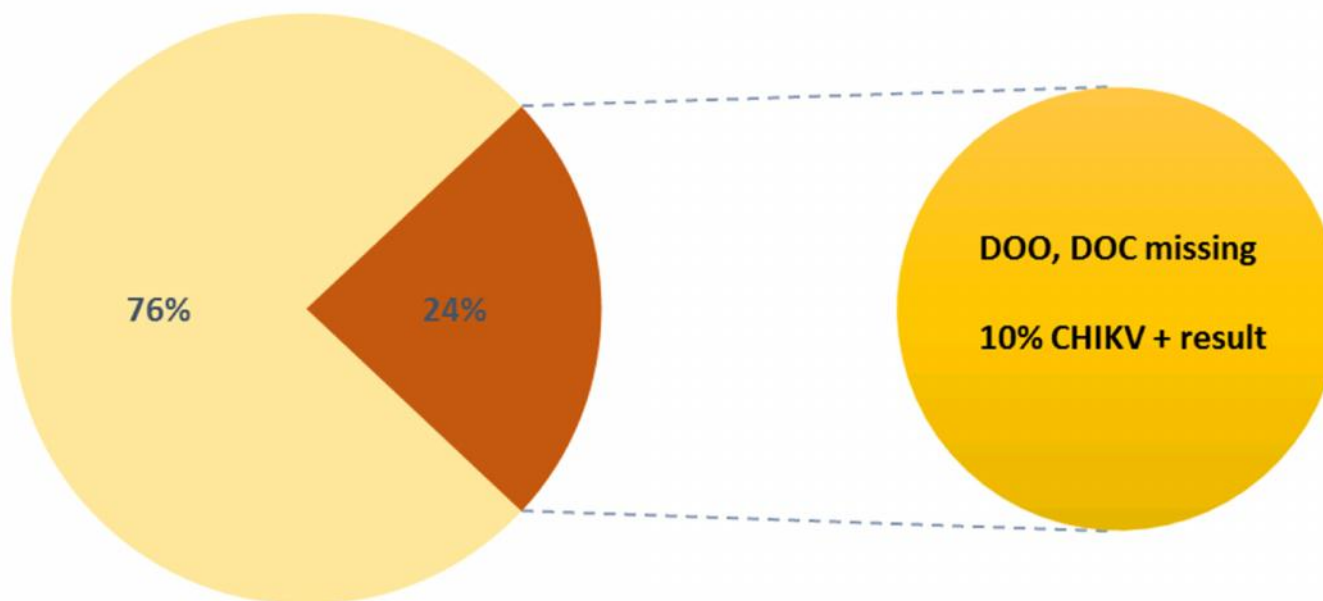
- Both the **DOO** and **DOC** are required to determine the appropriate laboratory test e.g. molecular vs serological methods





# Example: Chikungunya Virus January-June 2014

GRAPH 2. CHIKUNGUNYA VIRUS TEST REQUESTS

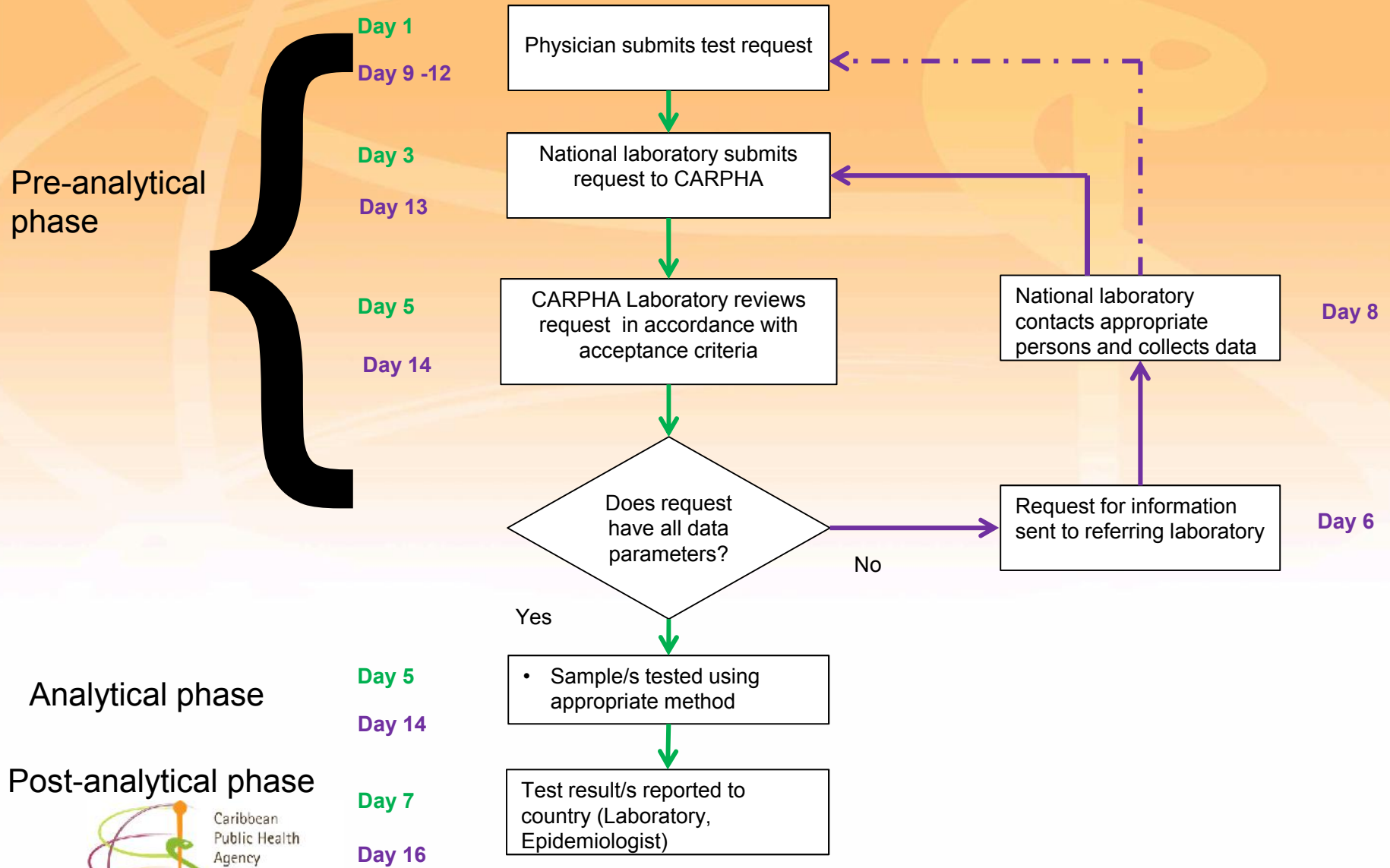


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# Incomplete data – Effect on Turn Around Time



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# Consequences

- Poor laboratory surveillance of pathogens of public health importance
- Under-reporting or non-reporting of pathogen/s in circulation e.g. EPI
- Further delays in response to emerging situations
- Impact on case management
- Loss of confidence in the system

# Recommendations

- Review current system of referral (local, Regional)
- Feedback to primary care professionals essential
- Sensitization of physicians, nurses/phlebotomists, laboratory staff
- Strengthen collaboration between Epidemiology and Laboratory teams to ensure appropriate data is available for all submissions

