

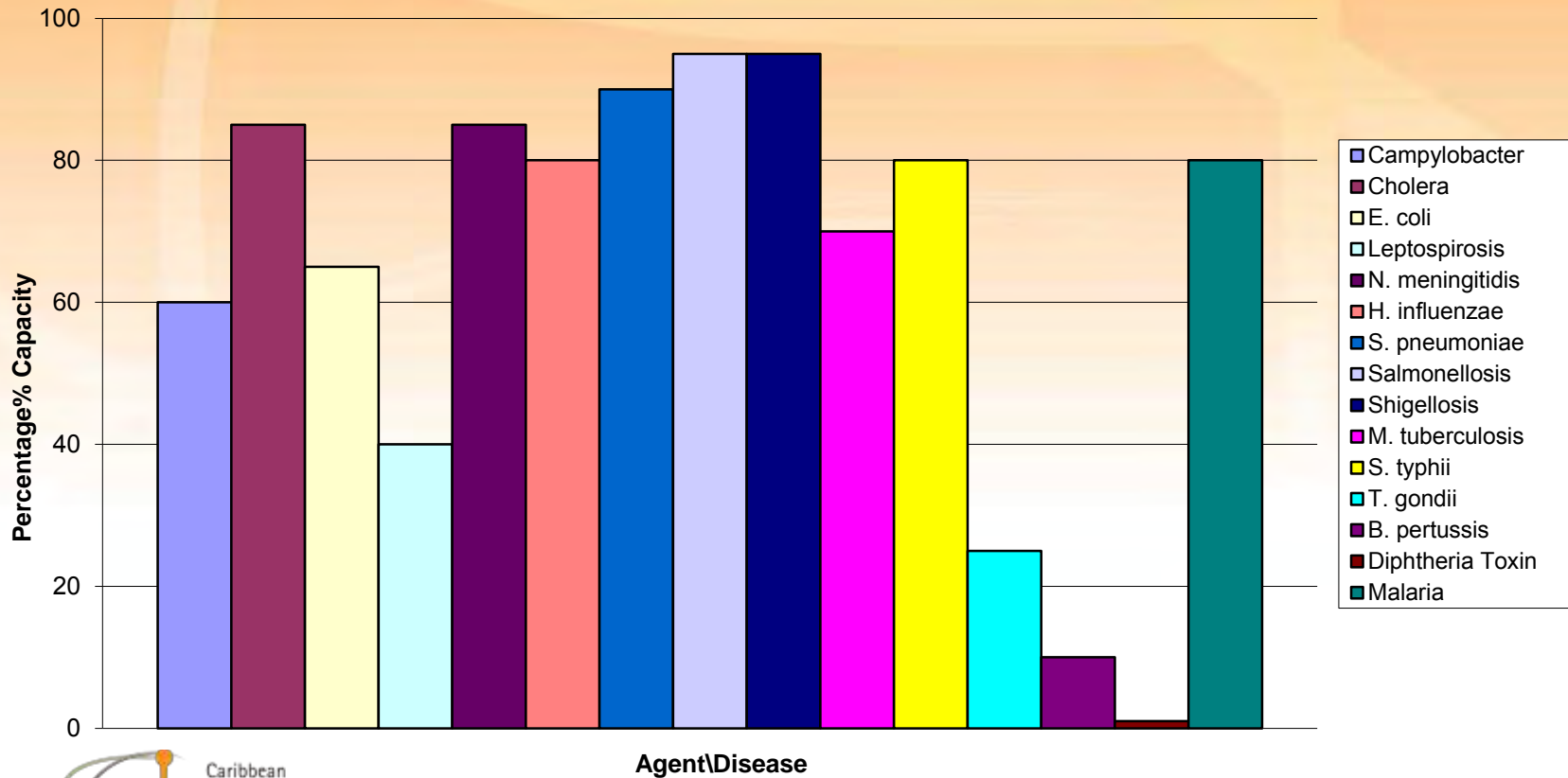
Laboratory Survey Results



Preventing disease, promoting and protecting health

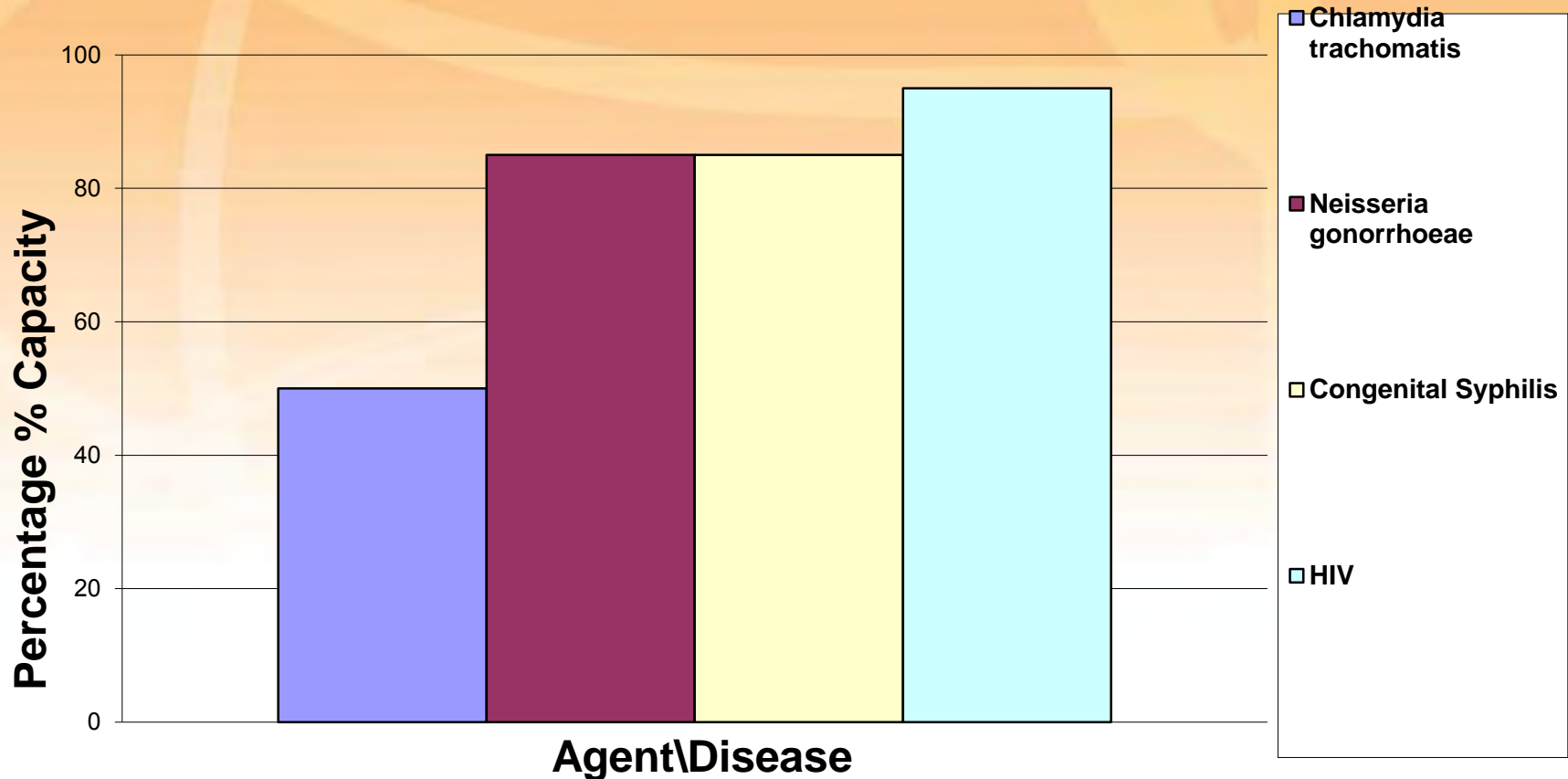
Laboratory Survey 2011

Bacteriology Laboratory Capacity in Twenty (20) CMC



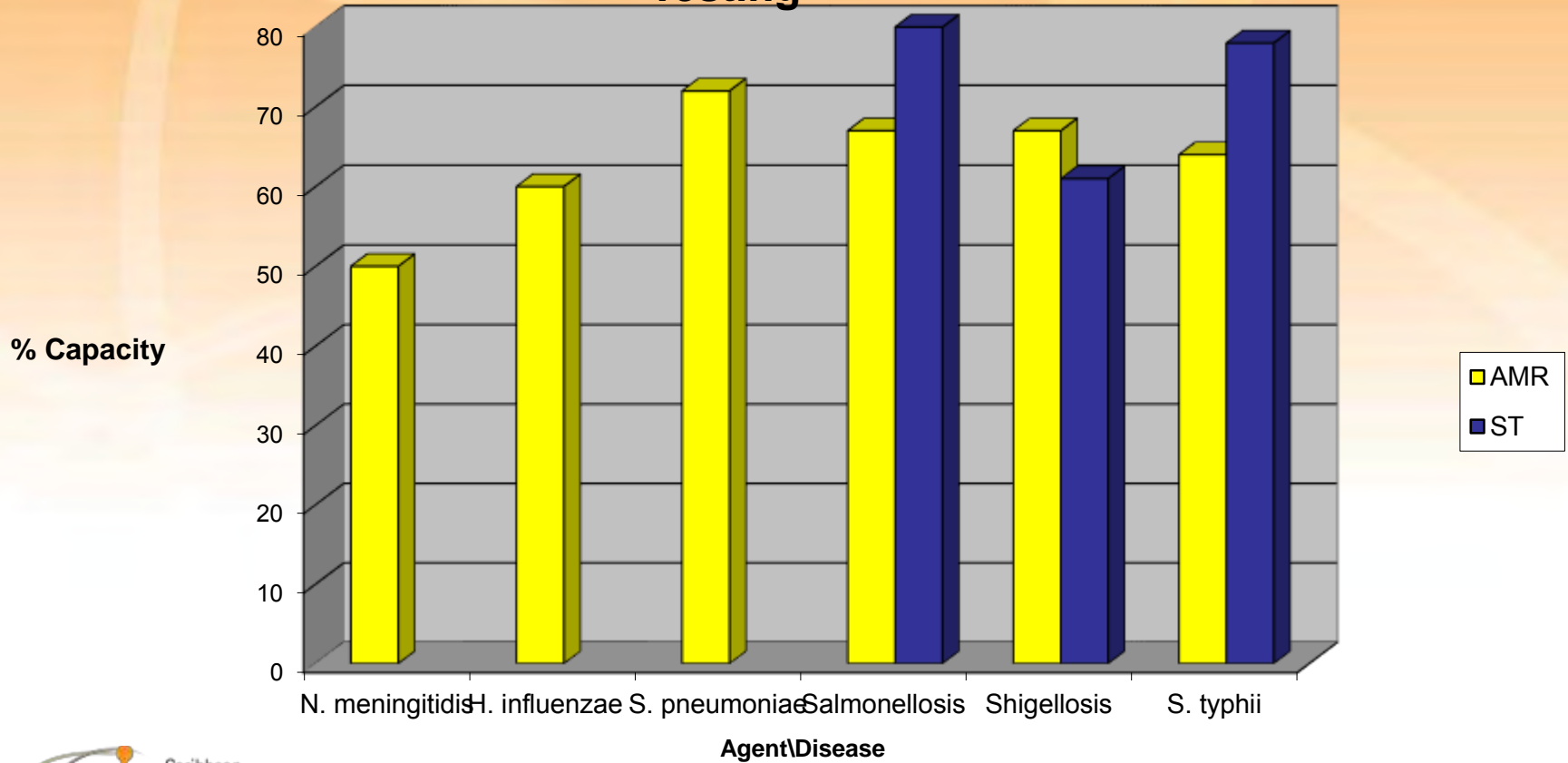
Laboratory Survey

STI Laboratory Capacity in Twenty (20) CMC



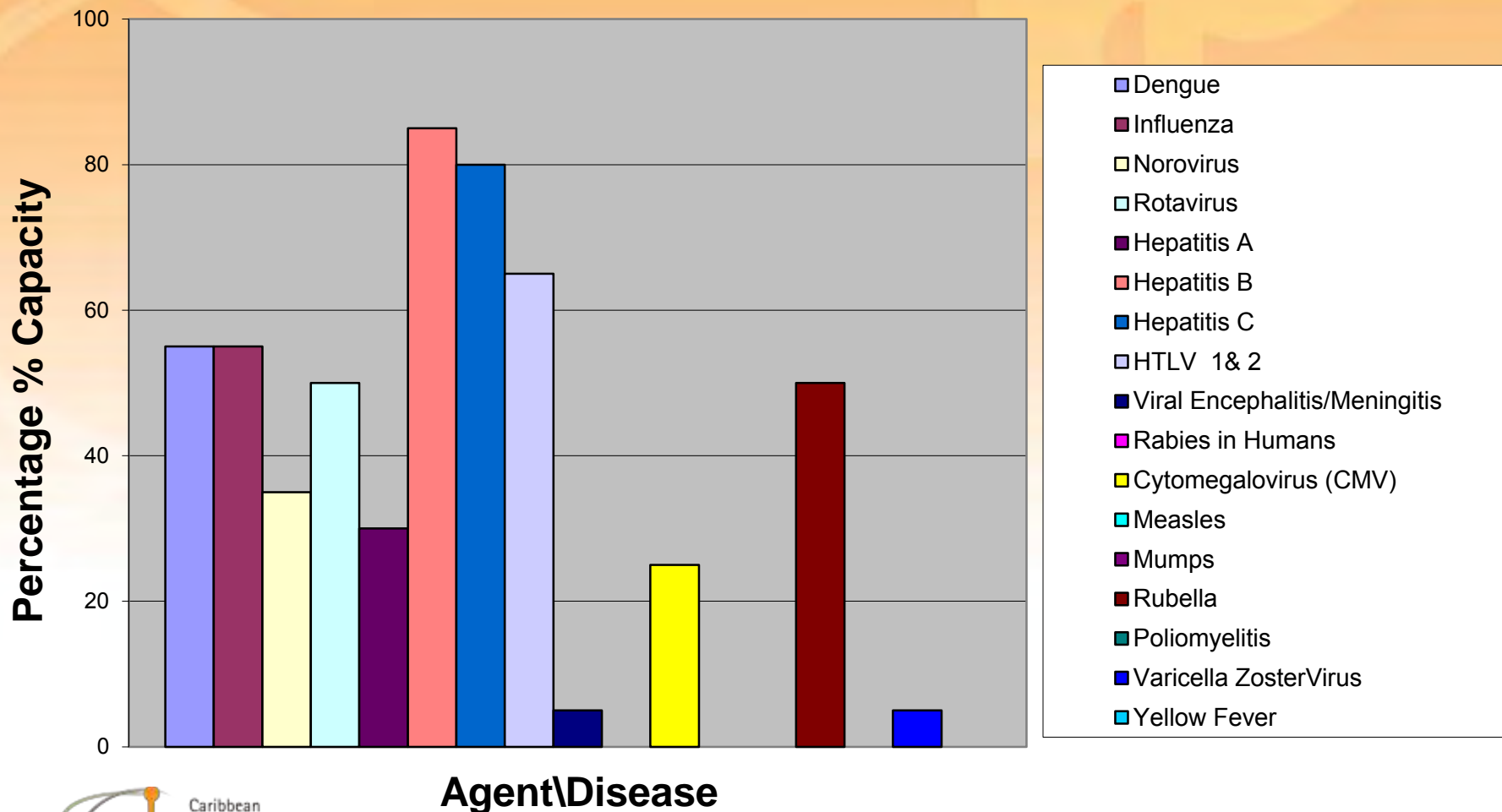
Laboratory Survey 2011

Capacity for Serotyping and Antimicrobial Resistance Testing



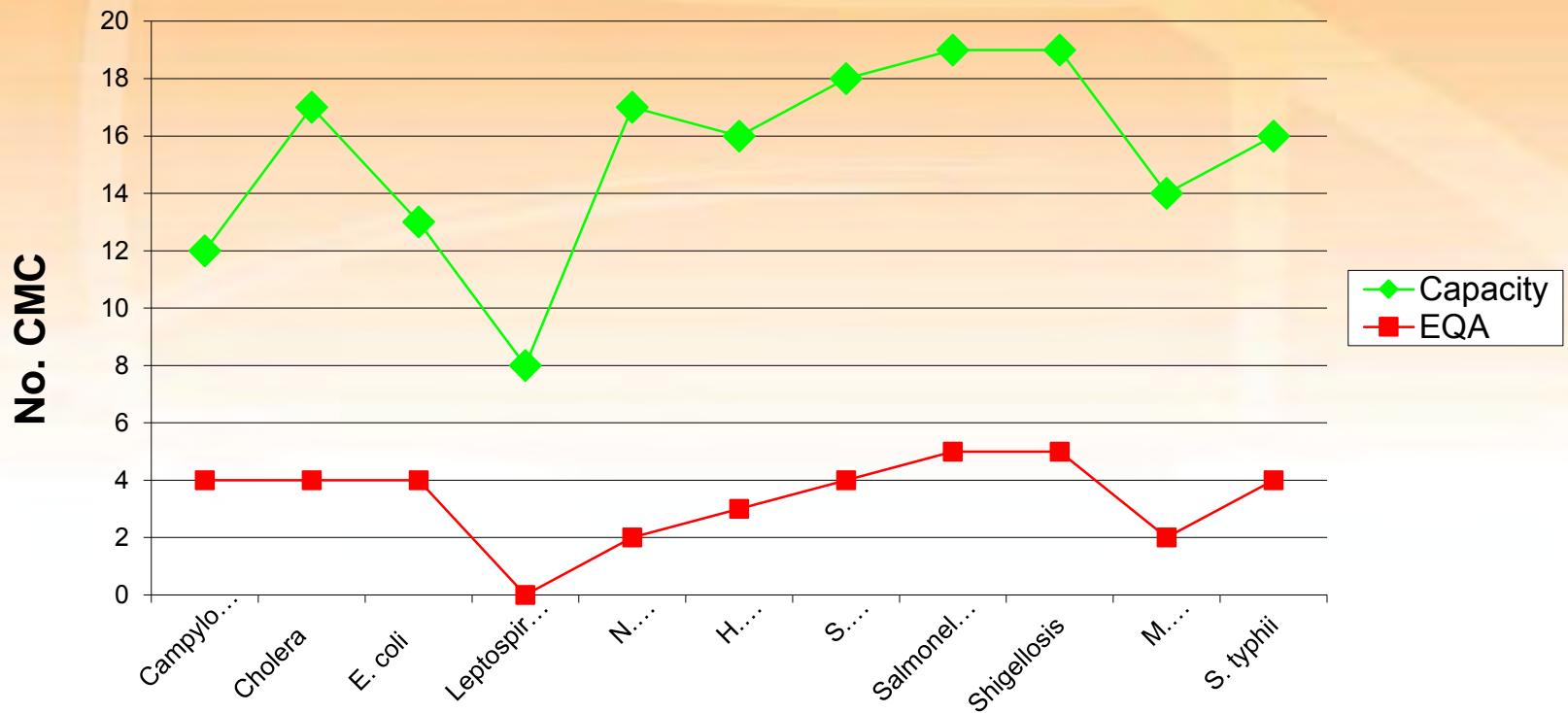
20 CARICOM Member States – Survey 2011

Virology Laboratory Capacity



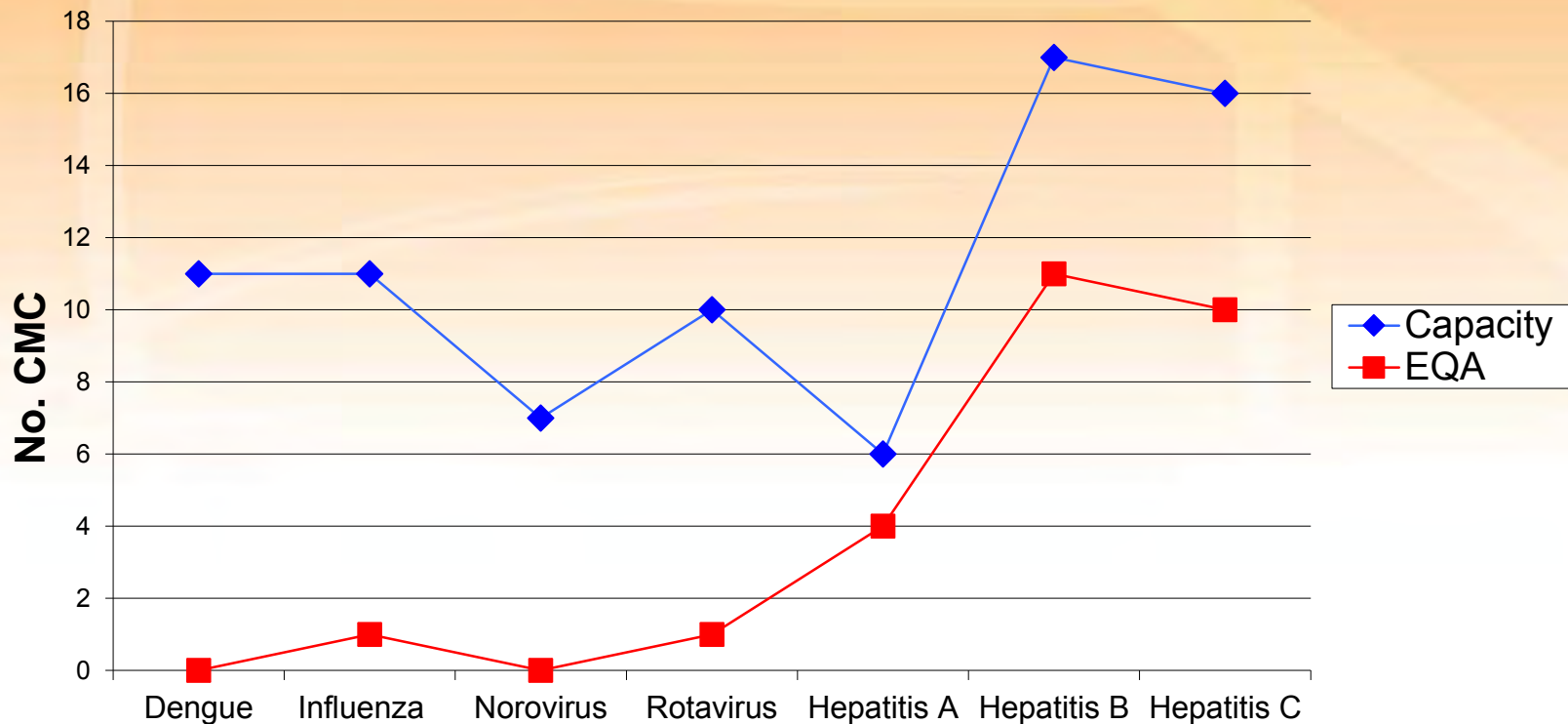
Laboratory Survey 2011

EQA Participation for Microbiology Tests



Laboratory Survey 2011

EQA Participation for Virology Tests



Caribbean
Public Health
Agency

CARPHA

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Key needs for Laboratory development

CAREC survey 2011

- Inadequate QMS implementation
- Lack of intermediate and advanced testing services
- Lack of standardised and appropriate methods
- Safety and biosafety
- Specimen Transport - Legal/ethical implications
- New technologies
- Low staffing levels
- Inadequate national and regional networking

CARPHA Laboratory Assessment Tool

- WHO developed a generic questionnaire to help the assessment of laboratory systems. It was adapted by CARPHA to meet the specifications of the Public Health Laboratories in the Caribbean Region. (whqlibdoc.who.int/hq/2012/WHO_HSE_GCR_LYO_2012.2_eng.pdf)
- It is based on the internationally recognized standards and good practices governing laboratory services, but does not take into account specific national norms or regulations.
- Cover, 11 data collection modules, Gap analysis, Summary

Cover / Lab / 1.Orga / 2.Docs / 3.Specimen / 4.Data / 5.Reagents / 6.Equip / 7.Testing / 8.Facilities / 9.HR / 10.Biorisk / 11.Public Health / 12.Gap Analysis / Summary



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Data collection modules

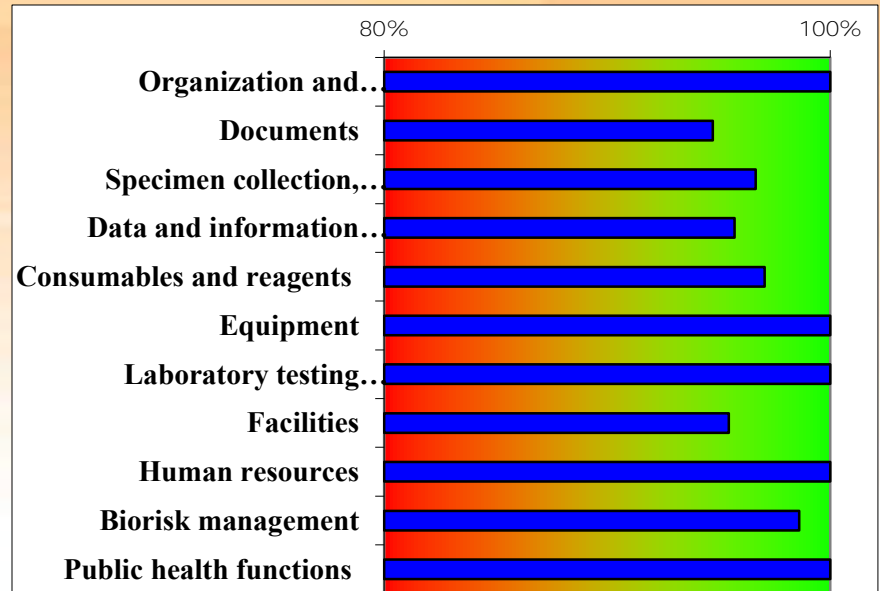
(523 indicators)

1. Organization and management
2. Quality management
3. Biorisk management
4. Data and information management
5. Specimen collection, handling and transport
6. Procurement, inventory and storage of reagents
7. Equipment and maintenance
8. Testing performance
9. Facilities and work conditions
10. Human Resources
11. Public Health functions

Summary Module

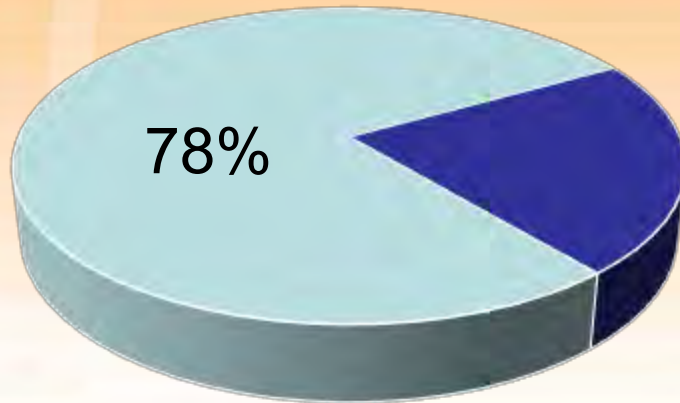
Average indicator **98%**

Organization and management	100%
Documents	95%
Specimen collection, handling and transport	97%
Data and information management	96%
Consumables and reagents	97%
Equipment	100%
Laboratory testing performance	100%
Facilities	95%
Human resources	100%
Biorisk management	99%
Public health functions	100%

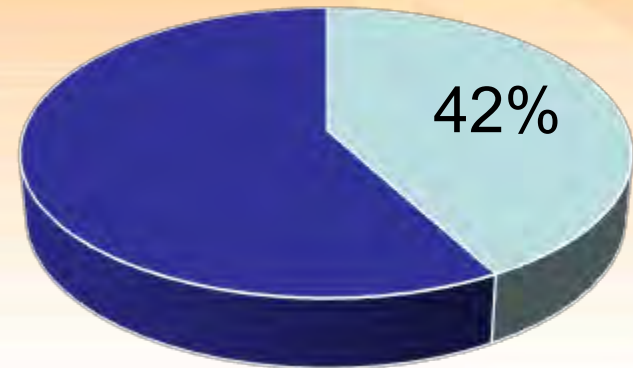


Member States Response

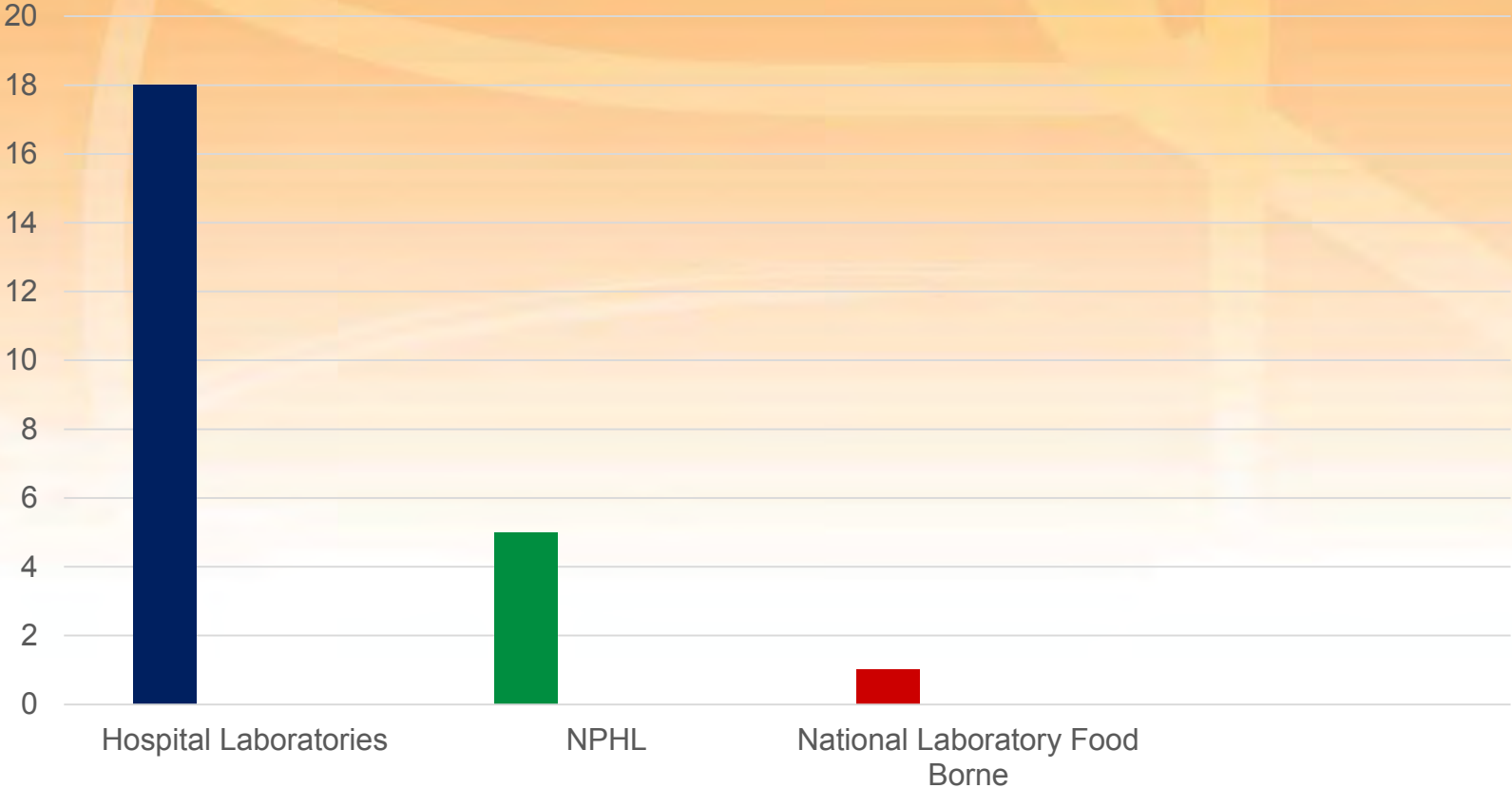
Response received: 18/23



Response received in deadline: 8/18



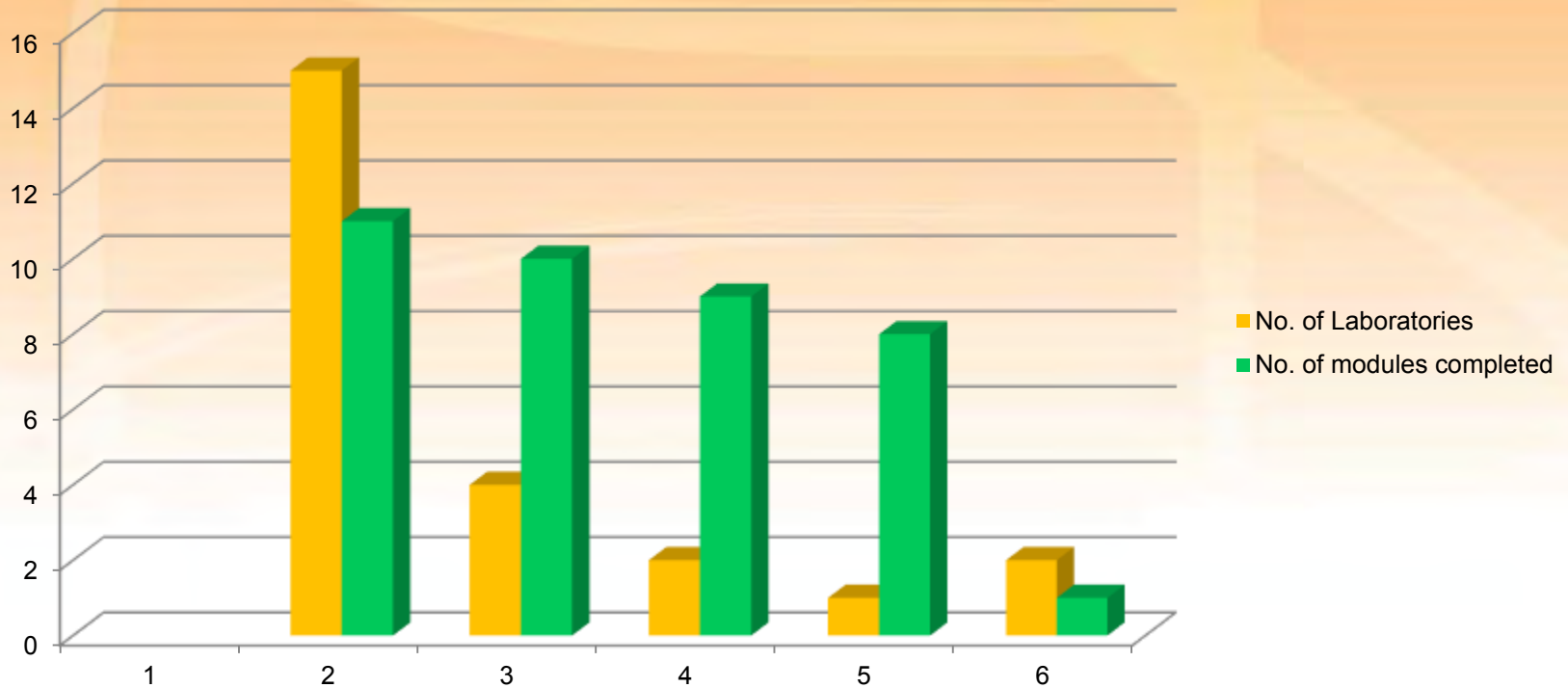
Category of Laboratories



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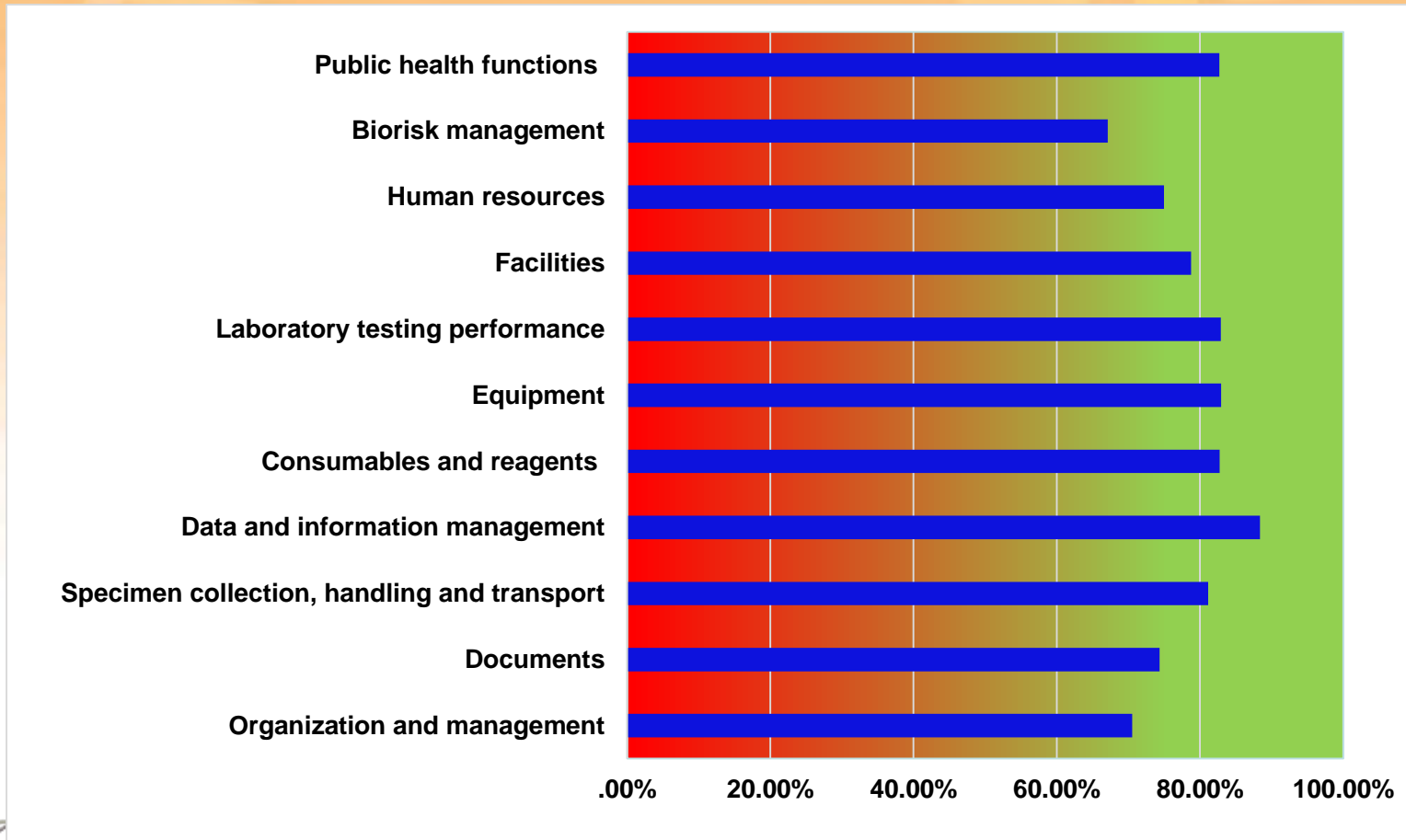
Completeness of the Questionnaire

24 Laboratories, 18 CMSs



Laboratories Score Average

N= 24



Examples of Individual Score Average

N= 7

	10	11	12	13	14	15	16
1							
2	Organization and management			93,3%	86,0%	37,5%	
3	Documents	76,3%	37,6%	95,0%	95,2%	72,5%	
4	Specimen collection, handling and transport	98,1%	83,8%	89,4%	50,0%	61,5%	
5	Data and information management	87,7%	85,8%	99,5%	93,8%		
6	Consumables and reagents	90,6%	72,2%	100,0%	91,2%	70,6%	
7	Equipment	87,5%	78,5%	100,0%	87,0%	63,1%	
8	Laboratory testing performance	76,3%	91,7%	100,0%	100,0%	61,2%	87,0% 100,0%
9	Facilities	90,9%	72,9%	95,1%	87,5%	63,6%	
10	Human resources	94,4%	50,0%	95,0%	90,0%	35,0%	
11	Biorisk management	75,8%	49,4%	98,8%	94,3%	72,2%	
12	Public health functions	94,4%		73,3%	84,4%	63,9%	

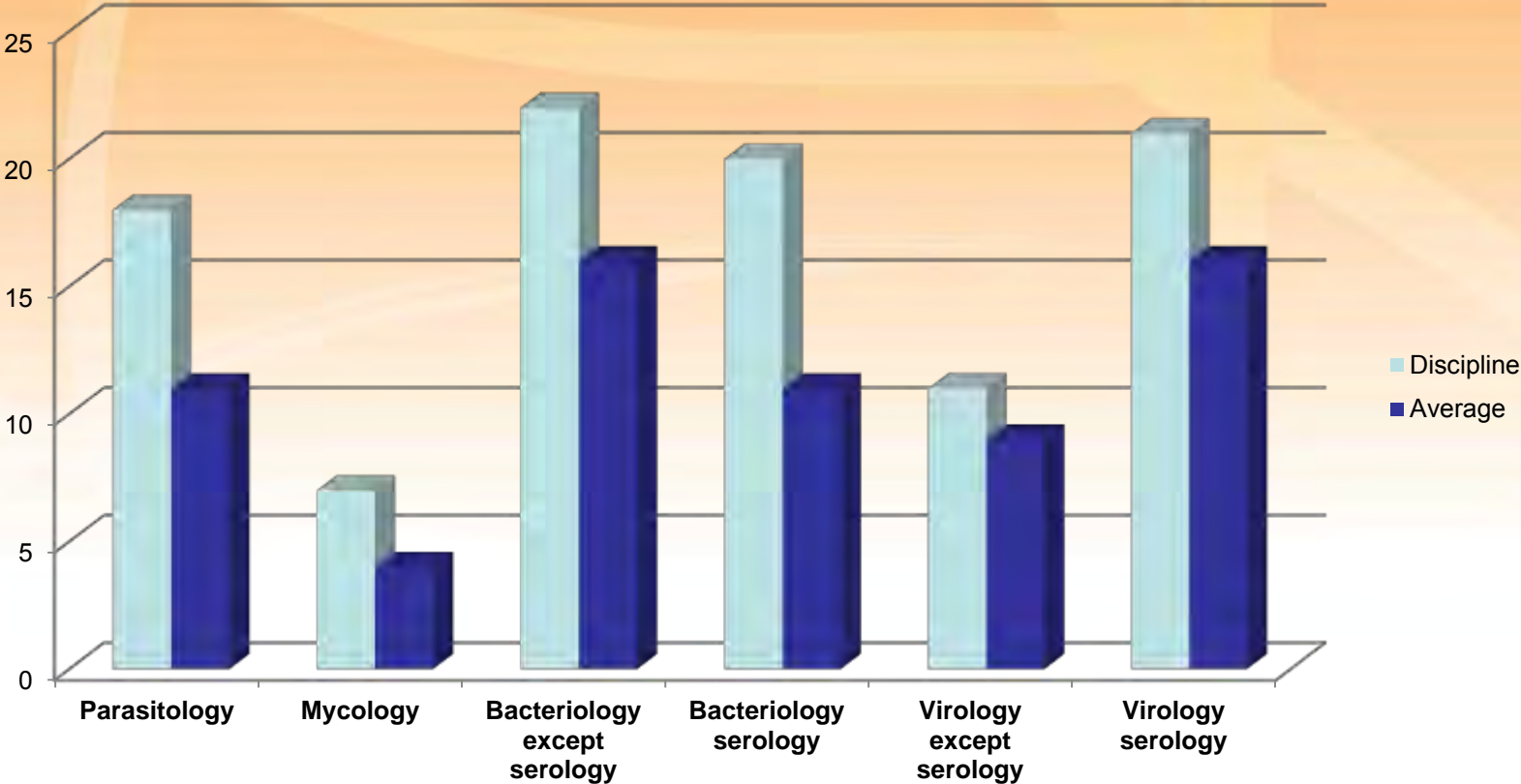
Testing Module

Possible answers (unless otherwise advised): 1. Yes; 2. Partial; 3. No; 4. Non applicable

Pathogen/Disease	Discipline #	Specimen type	Method/s and Instrument/s	Frequency Average number of tests performed monthly	Staff Is staff competent to perform the test?	SOPs		Equipment			Reagents/Test kits		Quality Control			External Quality Assessment			Automatic calculation, not to be filled in here Score per test
						Is SOP available for this test?	Is the SOP adequate/up-to-date?	Is equipment appropriate for this test?	Is equipment adequately maintained?	Are adequate reagents for this test available?	Are the reagents in-date?	Are IQC specimens included when performing this test?	Are IQC results acceptable?	Are corrective actions implemented if IQC results are not acceptable?	Does the laboratory participate in EQA for this test?	Are EQA results acceptable?	Are corrective actions implemented if EQA results are not acceptable?		
e.g. <i>Campylobacter</i>	5	Stool	Culture	2	1	1	1	1	1	1	1	2	3	4	4	1	1	2	82%
7.1 <i>Ascaris lumbricoides</i>	3	Stool	Microscopy	20	1	1	1	1	1	1	1	1	4	4	4	1	1	1	100%
7.2 Babesiosis	3		Microscopy	0	1	1	1	1	1	1	1	1	4	4	4	1	1	1	100%
7.3 <i>Balantidium coli</i>	3		Microscopy	20	1	1	1	1	1	1	1	1	4	4	4	1	1	1	100%
7.4 Chagas disease (<i>Trypanozoma cruzi</i>)	3		Serology	0															
7.5 <i>Chlamydia meningitidis</i>	3		Microscopy	0															
7.6 <i>Cryptosporidium</i>	3	Stool	Microscopy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100%
7.7 <i>Cyclospora cayentensis</i> (<i>parvovaginis</i>)	3	Stool	Microscopy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100%



Testing Capacity by Discipline and discordances

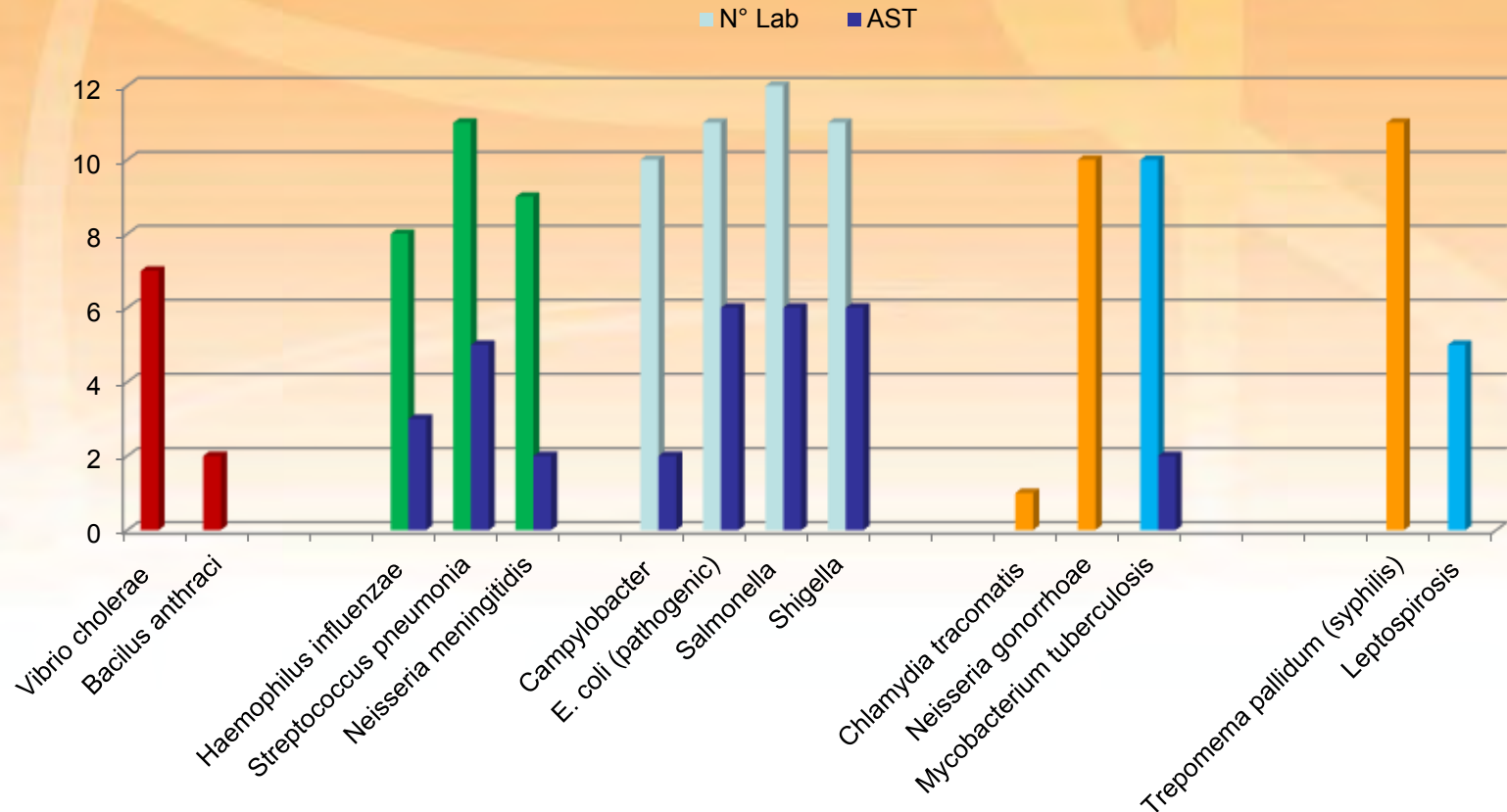


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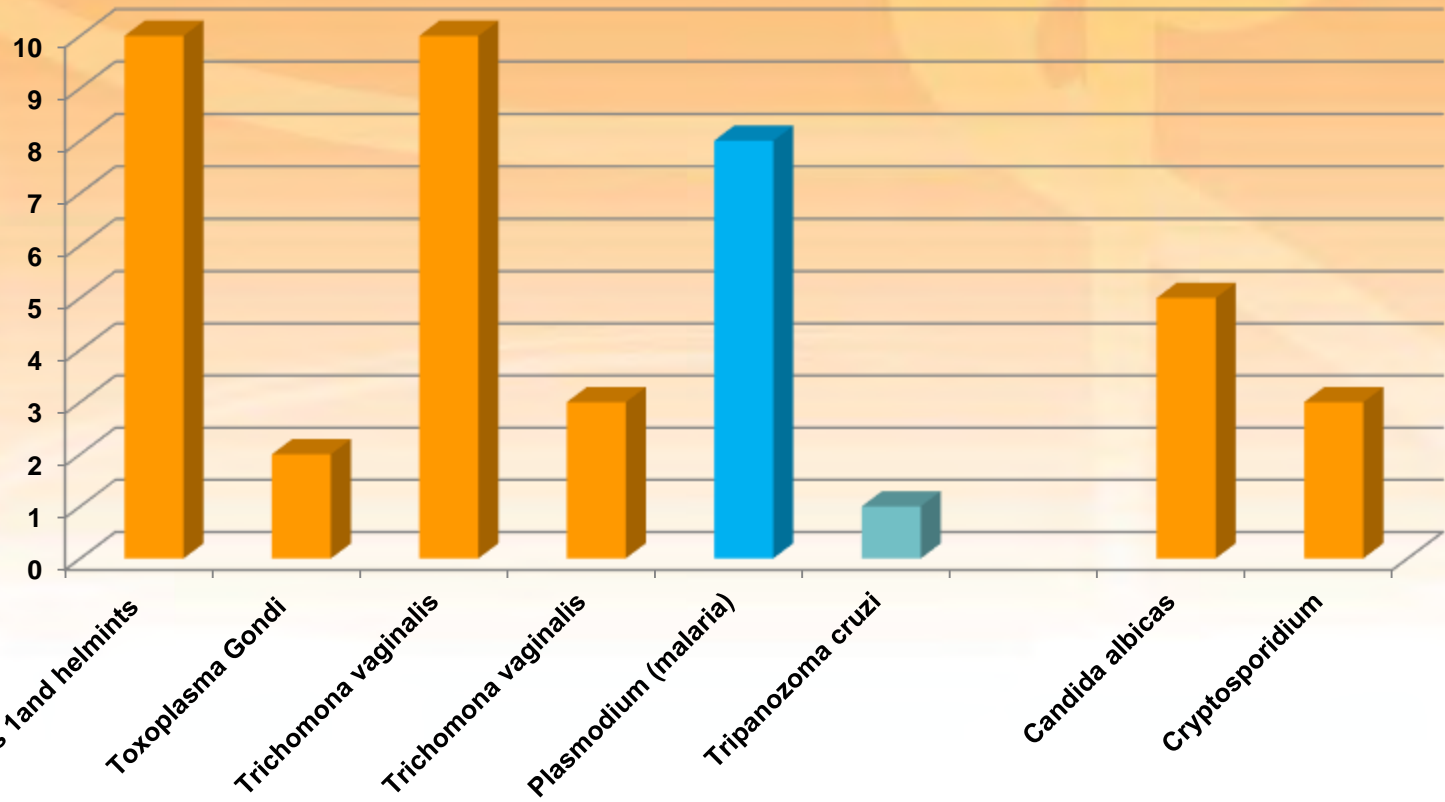
Bacteriology

Culture & ID

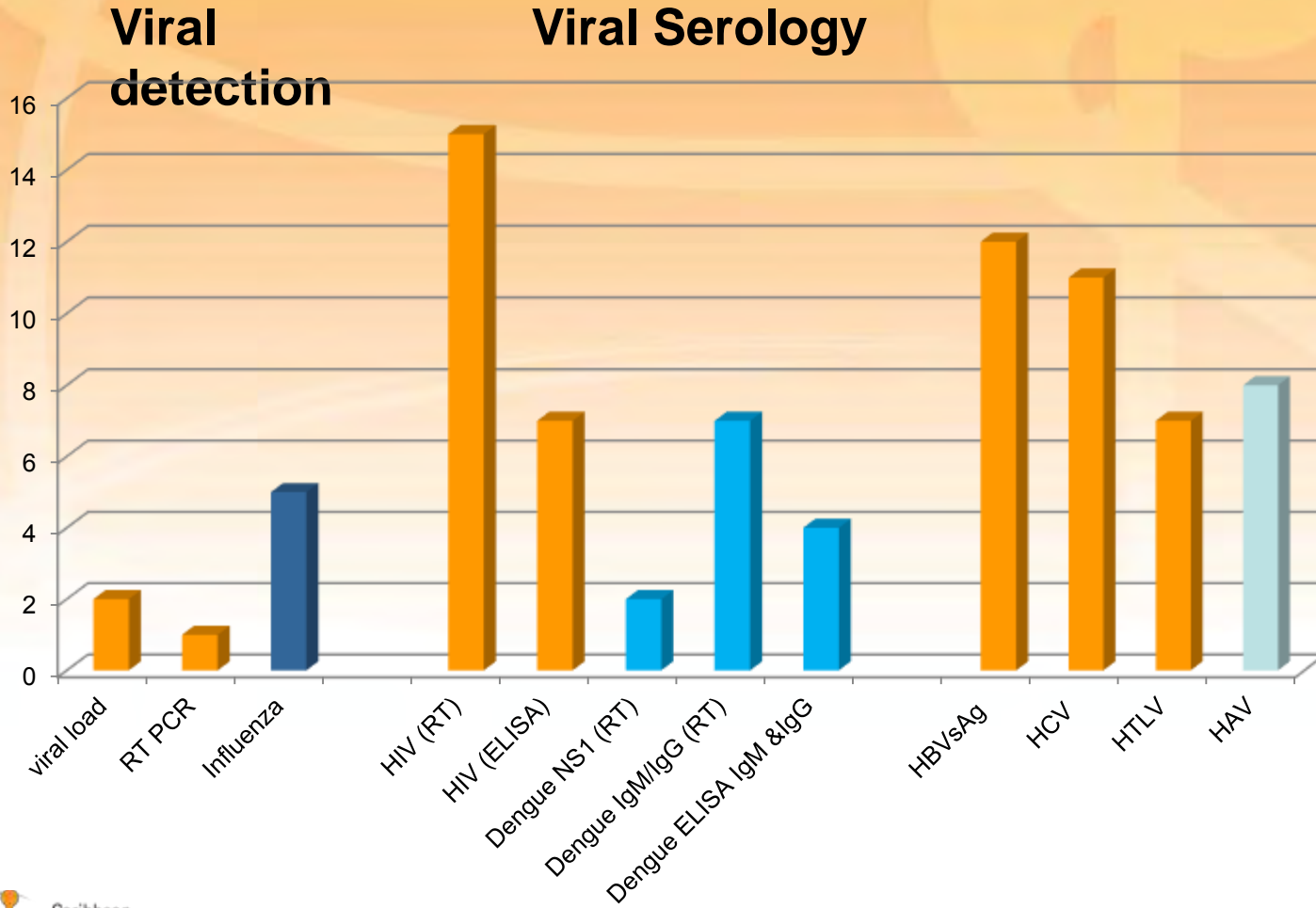
Serology



Parasitology and Mycology



Virology



Conclusions

1. CARPHA Laboratory Assessment tool combines essential elements required for the proper function of laboratory services, allowing laboratory self assessment to identify gaps and to monitor progress. It will be useful to be adopted at national and regional levels in the Laboratory Network.
2. The information collected from CMS laboratories is incomplete to draw conclusions, however enormous advances have been achieved in last 4 years in most elements required to provide the laboratory services.
3. Preliminary results indicate concerns persisting in the following elements
 - Testing capacity and introduction of new technology
 - Human resources
 - Biorisk management.