Capacity assessment of the health laboratory system in two resource-limited provinces in China

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6(T,)-3-302(Ma)]TJ7.837200257.6.1195660..6975.6551Tm(2)Tj10.4499002.5414940.51.75275.2628Tm[MiFaW.Ma

Background

[illegible] ([illegible], 2005) [illegible] ([illegible]) [illegible] 1 . [illegible] D [illegible] ([illegible]) 2 . [illegible] .

[illegible]

Table 1 Assessment modules included in the adapted WHO Laboratory Assessment Tool used in Guangxi and Guizhou Provinces, China, 2014

Modules	Laboratory Capacities
Organization & management	Internal & external communication, budget, licensing/supervision/accreditation
Documents	Document control system, quality procedures, biosafety documents
Specimen collection, handling & transport	Specimen collection, handling, referral/transport
Data & information management	Test results and reports, data analysis and statistics, data security & confidentiality, it and laboratory information management system (LIMS)
Consumables & reagents	Procurement, inventory and storage, use, expired reagents
Equipment	Equipment inventory, maintenance, calibration and monitoring
Laboratory testing performance	All relevant tests performed, concerning bacteriology, virology, parasitology and food
Facilities	Infrastructure, work conditions
Human resources	Staff number, qualifications, continuous education
Biorisk management	Biorisk management policy, biorisk assessment and control, implementation and operation
Public health functions	Surveillance and response, specimens and reporting for public health purposes

< 70%. (16.0,).

Results

Overall assessment scores

(75.7%) 11 (2). (79.6%) (77.8%) (73.7%) 11

Table 2 Aggregated performance scores on 11 assessment modules for 28 laboratories, categorized by administrative level (provincial, prefecture, and county) and laboratory sector (Public Health - PH, and Clinical - CL), in Guangxi and Guizhou Provinces, China, 2014

Assessment modules	Average (%)	Provincial (%)			Prefecture (%)			County (%)		
		All	PH	CL	All	PH	CL	All	PH	CL
Average	75.7	79.6 (13.5)	81.5 (15.3)	77.6 (17.3)	77.8 (7.6)	75.9 (5.3)	79.8 (9.9)	73.7 (14.6)	72.8 (14.8)	74.6 (15.5)
Organization & management	71.4	77.6 (12.4)	74.3 (18.6)	80.9 (8.4)	74.7 (14.5)	66.1 (5.8)	83.3 (16.1)	68.1 (18.3)	67.5 (25.2)	68.8 (8.9)
Documents	75.4	87.7 (20)	97.7 (3.2)	77.6 (27.9)	83.6 (15.3)	88.3 (9.4)	78.9 (19.9)	68.2 (27.8)	74.1 (30.5)	62.3 (25.4)
Specimen collection, handling & transport	85.3	80.4 (11.2)	77.4 (15.2)	83.4 (10.6)	89.1 (6.2)	87.1 (7.4)	91 (5.1)	84.6 (14)	87 (10.7)	82.3 (17.1)
Data & information management	81.6	75.8 (17)	71.3 (24.7)	80.3 (13.3)	82.6 (12.3)	82.2 (16.2)	83 (9.6)	82.6 (14.6)	85.1 (14.9)	80.1 (14.8)
Consumables & reagents	83.3	85.5 (12.4)	85.4 (15.2)	85.7 (15.2)	83.8 (9.6)	79.6 (7.1)	88.1 (10.8)	82.5 (15.7)	80.3 (12.2)	84.6 (19.2)
Equipment	87.6	84.5 (16.3)	75 (20.5)	94 (4.8)	90.9 (11)	89.5 (13.8)	92.3 (9.4)	86.8 (18.5)	88.6 (14.1)	84.9 (23)
Laboratory testing performance	71.3	70.7 (41.9)	87.2 (2.7)	54.3 (64.7)	68.4 (22.6)	64.9 (27.9)	71.8 (19.5)	72.9 (23.4)	73.8 (24.9)	72 (23.6)
Facilities	71.5	78.4 (22)	70.5 (34.7)	86.4 (0)	75.1 (21.1)	63.6 (24.5)	86.5 (9.7)	67.9 (18.9)	69 (19.6)	66.8 (19.6)
Human resources	79.5	88.8 (6.3)	85 (7.1)	92.5 (3.5)	80 (16.3)	68.8 (13.1)	91.3 (10.3)	76.9 (16.2)	71.9 (14.6)	81.9 (17.1)
Biorisk management	75.9	89.6 (10.9)	87.1 (14.4)	92.1 (11.2)	81.1 (18.8)	72.9 (23.2)	89.3 (10.6)	69.9 (29.9)	57.5 (32.8)	82.3 (22)
Public health functions	47.6	56 (40.7)	85.1 (11.6)	26.9 (38.1)	46.8 (31.8)	71.7 (17.7)	21.9 (19.8)	45.7 (27.8)	46.5 (26.5)	44.6 (32)

Module scores are defined as strong (> = 85%), good (70–84%), weak (50–69%), and very weak (< 50%)

(≥85%)
(≥ 70%)
(≤ 50%)

Assessment scores by administrative level

< 70%,
< 70%.

Public health functions

10

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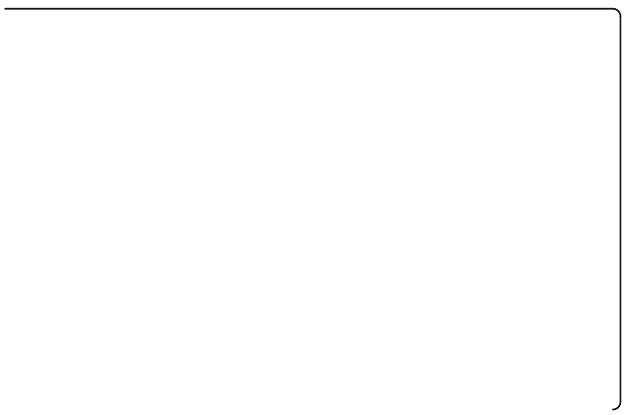

Availability of data and materials

According to study approval from China CDC, data and materials concerning the laboratory capacities of each participating laboratory will be kept away from public access.

About this supplement

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