

Laboratory capacity for Hepatitis B and C in select countries in the Western Pacific Region

- Three countries have a national reference laboratory for viral hepatitis.
- Four countries have capacity for diagnosing hepatitis A to E.
- Half of the countries have a referral system for samples or/and patients.
- Seven countries provide domestic External Quality Assurance (EQA) for hepatitis, but three of them have EQA only for blood screening laboratories.
- Nine countries participate in EQA run by international providers.
- Five countries have official guidance for testing for hepatitis.
- Six countries use a molecular test for blood screening.

Country	Clinical laboratory system					Blood screening laboratory system			
	National reference laboratory	Tests available	Referral system for confirmation (patient/sample)	External Quality Assurance Scheme (EQAS)		Official guidance for testing (which test to use)	Number of blood screening laboratories	Tests available	Donors informed of results
				Domestic EQAS EQA provider (Methods)	International EQAS EQA provider (Methods)				
Brunei Darussalam	No	HAV HBV Sero, Mol HCV Sero, Mol	Sample	No	RCPA QAP, CAP (HBsAg, anti-HBs, HBV-DNA, anti-HCV, HCV-RNA VL)	No	2	HBsAg, anti-HCV	Yes
Cambodia	No	HBV Sero, Mol HCV Sero, Mol	Not available	NIPH (HBsAg, anti-HCV)	PPTC (HBsAg, anti-HCV)	Not available	22	RDT, ELISA	Yes
China	NCCL	HAV/HDV/HEV HBV Sero, Mol HCV Sero, Mol	No	NCCL (HBsAg, anti-HBs, HBV-DNA, anti-HCV, HCV-RNA VL)	CAP (HBsAg, anti-HBs, HBV-DNA, anti-HCV, HCV-RNA VL)	Yes	384	HBsAg, HBV-DNA, anti-HCV, HCV-RNA	Yes
Lao People's Democratic Republic	No	HBV Sero, Mol HCV Sero, Mol	Sample (partially)	NBTC* (HBsAg, Anti-HCV)	UK NEQAS (HBsAg, anti-HBs, HBV-DNA, HCV-RNA VL) PPTC* (HBsA, anti-HCV)	No	18	RDT, ELISA	Yes
Malaysia	No	HAV HBV Sero, Mol HCV Sero, Mol	Sample	NBC*	RCPA, CAP, ACP MLE (HBsAg, anti-HBs, HBV-DNA, anti-HCV, HCV RNA VL)	Yes	13	HBsAg, HBV-DNA, anti-HCV, HCV-RNA	Yes

Mongolia	NCCD	HAV/HDV/HEV HBV Sero, Mol HCV Sero, Mol	Patient/ sample	NCCD (HBsAg, HBV-DNA, anti-HCV, HCV RNA VL)	NRL, RCPA (HBsAg, HBV-DNA, anti- HCV, HCV-RNA VL)	Yes	26	HBsAg, HBV- DNA, anti- HCV, HCV- RNA	Yes
Papua New Guinea	No	HBV Sero	No	No	No	No	22 (HBV only)	HBsAg	Yes
Philippines	SACCL, RITM	HBV Sero, Mol HCV Sero, Mol	Patient/ sample	SACCL (HBsAg, anti-HCV) RITM* (HBsAg, anti-HCV)	NRL (HBsAg, anti-HBs, HBV- DNA, anti-HCV, HCV- RNA VL) NRL, UK NEQAS, CAP* (HBsAg, anti-HCV)	Yes	188	ELISA, NAT (multiplex)	Yes
Singapore	No	HAV/HDV/HEV HBV Sero, Mol HCV Sero, Mol	No	No	CAP, RCPA, QCMD (HBsAg, anti-HBs, HBV- DNA, anti-HCV, HCV RNA VL)	Yes-General guideline	1	HBsAg, HBV- DNA, anti- HCV, HCV- RNA	Yes
Viet Nam	No	HAV/HDV/HEV HBV Sero, Mol HCV Sero, Mol	No	Designated by MOH* (HBsAg, HBV-DNA, anti-HCV, HCV- RNA)	NRL (HBsAg, HBV-DNA, anti- HCV, HCV-RNA)	No	58 (blood transfusion hospitals) >50 (hospitals)	HBsAg, HBV- DNA, anti- HCV, HCV- RNA	Yes

*Provide EQA for blood screening laboratory

Abbreviations

National Laboratories

NBC: National Blood Centre; NBTC: National Blood Transfusion Centre; NCCD: National Center for Communicable Diseases; NCCL: National Center for Clinical Laboratories; NIPH: National Institute of Public Health; RITM: Research Institute for Tropical Medicine; National Reference Laboratory San Lazaro Hospital/STD AIDS Cooperative Central Laboratory

Tests

ELISA: enzyme-linked immunosorbent assay; Mol: molecular diagnosis; NAT: Nucleic Acid test; RDT: rapid diagnostic test; Sero: serological diagnosis; VL: viral load

International External Quality Assurance (EQA) providers

ACP MLE: American College of Physicians Medical Laboratory Evaluation; CAP: College of American Pathologists; CDC: Centers for Disease Control and Prevention; NRL: National Serology Reference Laboratory; PPTC: Pacific Paramedical Training Centre; QCMD: Quality Control of Molecular Diagnostics; RCPA QAP: The Royal College of Pathologists of Australasia Quality Assurance Programs; UK NEQAS: United Kingdom National External Quality Assessment Scheme

Institutions surveyed

Member States	Institutions – Clinical Laboratory	Institutions – Blood Screening Laboratory
Brunei Darussalam	Department of Laboratory Services, Ministry of Health	
Cambodia	National Center for HIV/AIDS and Dermatology (NCHADS) National Institute of Public Health (NIPH)	
China	National Center for Clinical Laboratories (NCCL) National Center for AIDS/STD Control and Prevention (NCAIDS)	
Lao People's Democratic Republic	National Center for Laboratory and Epidemiology (NCLE) The Center of HIV/AIDS/STI (CHAS) Center Infectiology Lao-Christophe Merieux	National Blood Transfusion Centre (NBTC)
Malaysia	Institute for Medical Research (IMR) Hospital Kuala Lumpur (HKL) National Public Health Laboratory (NPHL)	National Blood Center (NBC)
Mongolia	National Center for Communicable Diseases (NCCD)	National Center for Transfusion Medicine (NCTM)
Papua New Guinea	Central Public Health Laboratory (CPHL) PNG Institute of Medical Research (PNGIMR) Pacific International Hospital (PIH)	
Philippines	National Reference Laboratory San Lazaro Hospital/STD AIDS Cooperative Central Laboratory (NRL-SLH/SACCL)	Research Institute for Tropical Medicine (RITM)
Singapore	Ministry of Health Singapore	
Viet Nam	Viet Nam Administration of HIV/AIDS Control (VAAC)	National Institute of Haematology – Blood Transfusion (NIHBT)