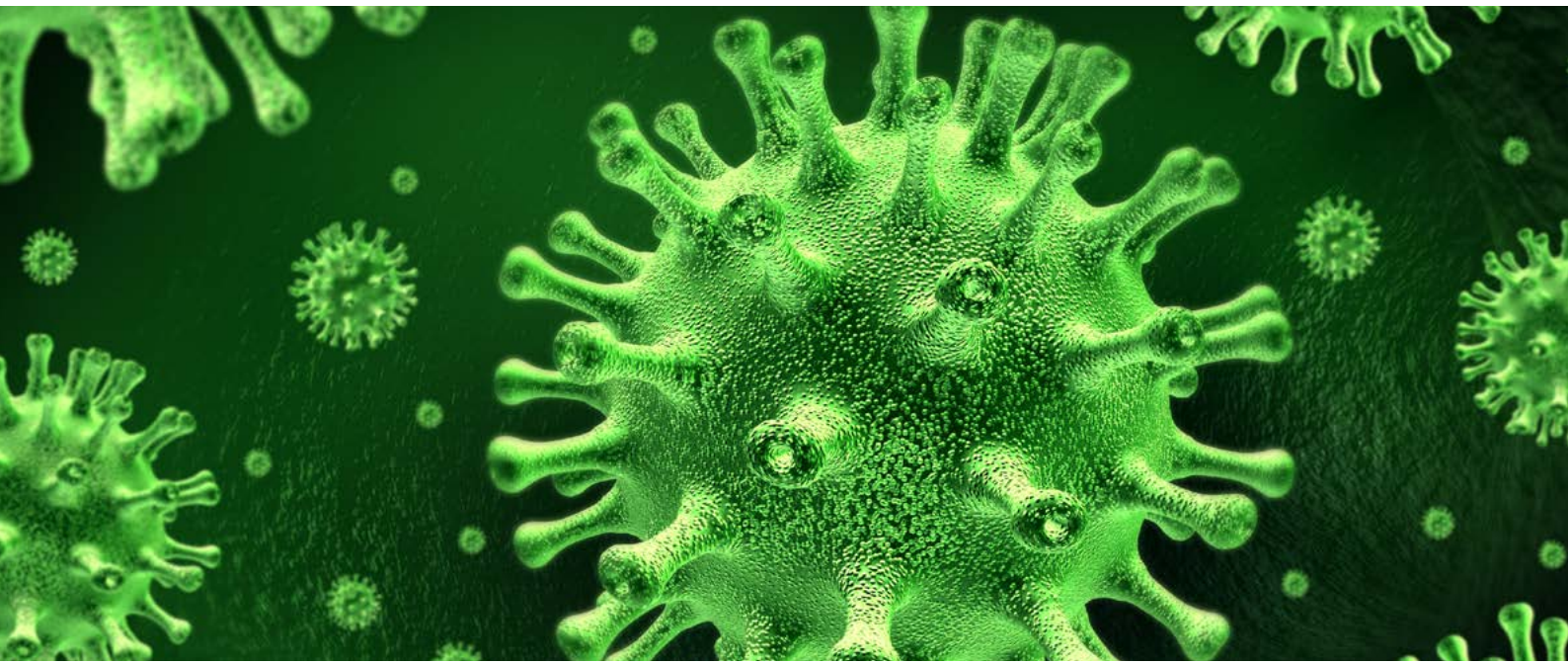
QML Pathology
Newsletter

INSIDE THIS ISSUE:

ISSUE 2, 2021



In reflection: QML's experience with the SARS CoV-2 Pandemic

Dr Renu Vohra and Dr Sally Appleton

While all was relatively quiet in the QML Pathology laboratory over the 2019/2020 New Year period, ProMED-Mail - a program for monitoring emerging diseases - sent out requests for information on four cases of 'Undiagnosed Pneumonia' that had appeared in Wuhan, Hubei Province, China. Within the week, cases had increased to fifty-nine and Hong Kong was reporting travellers being hospitalised with pneumonia of an unknown cause. On 12th January 2020 a novel coronavirus was identified by genome sequencing in China, and parallels to SARS in 2002/2003 were starting to be drawn.

Concurrently, Australia was facing a crisis with bushfires and resulting P2 mask shortages that caused news-worthy queuing at hardware stores across the nation. In the background of the public discord, microbiologists were getting edgy about the looming threat of an emerging infectious disease. By the end of January, there were daily meetings with public health officials about 'novel Coronavirus 2019' (nCoV-2019 at that time) and we were looking for ways to prepare the laboratory and collection centres to meet community and hospital patient requirements in the event that this Coronavirus reached our shores. During this time our team went so far as to set-up procedures with laboratory management should QML Pathology staff become infected.

Australia's first case of 'nCOV-2019' was diagnosed in a traveller from Hubei who arrived in Melbourne on the 25th January 2020. Queensland shortly followed with a group of travellers arriving at the Gold Coast whom were diagnosed with nCoV-2019 by PCR performed by Queensland's Public Health Virology Laboratory in Coopers Plains.

In February, QML Pathology began testing for SARS-CoV2 via PCR of respiratory samples in our main laboratory at Murarrie. As we are now all deeply aware, the sudden influx of testing and proaction resulted in shortages of PPE across the nation. Similarly, there were shortages of reagents for testing for this novel disease from the outset.

>>> CONTINUED OVERLEAF

If you would prefer to receive the newsletter electronically, please email info@qml.com.au

The first set of testing available required the use of in-house assays but were quickly replaced by newly available commercial assays. Unfortunately, when practically the entire world is testing for the same virus, a country that is (thankfully) not as impacted by the virus does not receive priority delivery of reagents. The resulting shortage in extraction reagents – used to retrieve DNA/RNA from patient samples - saw QML Pathology roll back its availability to provide certain PCR tests to meet COVID testing demands, including faeces PCR for bacteria and parasites, and other respiratory viruses.

Reliable reagent supply was a key concern of not just QML Pathology, but much of the world, along with uncertainty of how big the testing challenge COVID would present to each region. To prepare for the worst case scenarios, new equipment was brought into QML Pathology and a new "COVID Lab" was built within our Murarrie laboratory building. To ameliorate reagent shortage, our team introduced five different assays for COVID PCR testing, and use of these assays continues to this day. The coordinated efforts and long hours by builders, painters, electricians, IT, HR, procurement, equipment vendors and many other laboratory staff members meant that in just over two weeks from commencement of building works, we had the COVID Lab ready to accept samples. This COVID Lab enabled us to build capacity of up to 8000 tests per day, which stood us in good stead for the surge testing of Queenslanders, perform testing for public health-run clinics in Queensland, as well as allowing us to assist our partner laboratory in Victoria during their surges.

While we upgraded our COVID testing capabilities, we also recognised the need to review our collection centre processes to ensure the utmost protection for patients. Our aim to protect vulnerable patients from contracting COVID within collection centres had several iterations of infection control attempts in these relatively confined spaces. As the first iteration, signage and separate seating of patients in collection centres with more than one room proved ineffective as patients become ingenious at ignoring signs. We then designated only certain collection centres to perform testing on those referred for COVID. This worked relatively well but decreased the availability of testing location for general pathology testing and caused inconvenience for patients who could no longer attend their local collection centres. Then we found the answer in drive-through COVID testing.

The creation of drive-through clinics for respiratory specimen collections was revolutionary. This provides the safest way to keep patients separated from being exposed to other potentially-infected people and minimises interruption to general pathology testing. The first drive-through clinic opened early in April and this service expanded to over twenty locations during peak operations. The drive-through sites became essential when community cases were increasing and QML Pathology were forced to temporarily close a number of collection centres where patients could previously walk in to have a COVID swab collected.

Although things quieten down between major COVID surges, our labs have kept busy with testing continuing at a level that would be considered busy in a pre-COVID flu year but is now the new normal.
To supplement existing testing we have also introduced COVID serology to assist with recognising past and current infections. The uptake for this testing remains stagnant in Queensland but we may see such testing take off once national borders begin to open. As with COVID PCR requests, this is notifiable to Public Health when requested.

Throughout all the highs and lows COVID has bought, the entire QML Pathology family has come together to keep our labs running as smoothly as possible. We have had to train staff from various departments to work in the COVID Lab, had anyone with free hands packing PPE in our boardroom turned distribution centre, and medical liaison officers drive samples from hospitals to Murarrie to ensure fast turnaround times for vulnerable patients. Working from home is not always possible for those in a laboratory setting but some pathologists, call centre staff, and administration roles attempted to do so with varying degrees of success. Peak times at the COVID drive-throughs saw collectors and our IT team working from dawn until after dusk, warehouse staff directing traffic, executive staff and pathologists (including a friendly haematology registrar) working in the drive-through, and the COVID Lab team working long hours to get results through as quickly as possible.

The QML Pathology community spirit was strong, and we thank the broader Queensland medical community for continuing to trust us with assisting in caring for your patients.

Dr Jeff Fletcher BSc (Hons), MBBS, DCH, FRACP, PhD

QML Pathology would like to welcome Dr Jeff Fletcher in commencing his paediatric nephrology and general paediatric practice at Queensland Paediatrics Specialists - 'Compassionate Collaborative Care for Children' (formerly Paediatric Synapse Clinic - Southport) on 19th July 2021. Dr Fletcher is a well-respected paediatric nephrologist (kidney specialist); general paediatrician; clinical, laboratory and health services-based researcher; and has worked in the public health system in NSW and the ACT for 15 years in rural, remote, regional and tertiary level hospitals.

Dr Fletcher consults on all things related to the kidneys, bladder and toileting. He accepts referrals for any child under 18 years with chronic kidney disease (CKD); end stage kidney disease; pre- and post-kidney transplant; all forms of glomerulonephritis; nephrotic syndrome; isolated haematuria and proteinuria; urinary incontinence with daytime and/or night-time wetting; dysfunctional voiding; encopresis; and constipation. Dr Fletcher also has a special interest in, genomics, chronic and complex paediatric healthcare care and behavioural paediatrics – specifically ADHD, ASD and anxiety. He will happily evaluate any child with these conditions and aims to provide compassionate, collaborative care for the child and family.

Further information about Dr Fletcher's qualifications and publications can be viewed on his Research Gate profile: https://www.researchgate.net/profile/Jeffery-Fletcher.

Dr Fletcher is now accepting referrals through the below contact details.

P: (07) 5539 4961

F: 5527 8438

E: admin@qldpaeds.com.au

W: qldpaeds.com.au

Dr Thomas Skinner BPhty, MBBS (Hons), FRACP

Dr Skinner is a Thoracic and Sleep Physician. He worked as a respiratory physiotherapist in Brisbane and London before going on to study medicine at UQ, graduating with honours in 2012. He trained in thoracic and sleep medicine at the Royal Brisbane and Women's Hospital (RBWH), Greenslopes Private Hospital (GPH), and The Prince Charles Hospital (TPCH).

Dr Skinner has a broad range of skills across all aspects of respiratory and sleep medicine. His particular respiratory interests include: COPD, asthma, lung cancer, unexplained breathlessness and cough, and pleural disease. He has trained in interventional bronchoscopy and is adept in both radial and convex EBUS and transbronchial-cryobiopsy. Dr Skinner has completed a sleep medicine fellowship at TPCH and specialises in managing obstructive sleep apnoea and complex sleep disordered breathing.

P: (07) 3832 7776

F: (07) 3832 1070

E: reception@inspirationrespiratoryandsleep.com.au

Guideline updates for Prophylactic use of Rh D (Anti-D) immunoglobulin in pregnancy care.

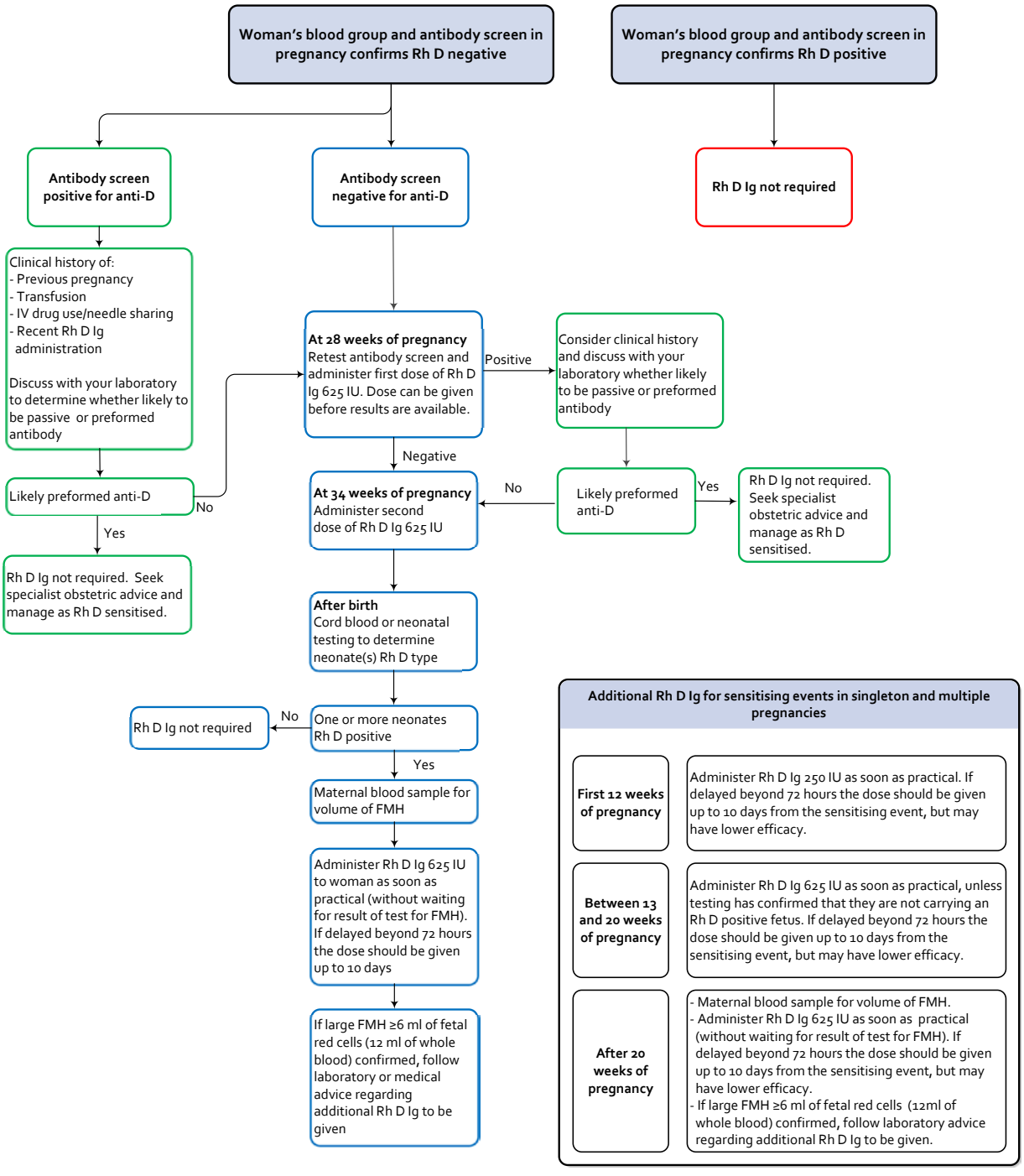
The National Blood Authority (NBA), alongside the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) and other experts, have developed new clinical guidance on the prophylactic use of Rh D immunoglobulin in pregnancy care. The Guideline introduces new clinical guidance on the use of non-invasive prenatal testing (NIPT) to determine fetal RHD status.

This guideline is targeted at health care professionals involved in the management of pregnant Rh D negative women.

To access the new Guideline and accompanying resources, go to the National Blood Authority website or use this direct link blood.gov.au/anti-d-0.

The below Care Pathway poster has been sourced from the National Blood Authority (NBA) website.
For further details or updated resources, please refer to the NBA site blood.gov.au.

Care pathway for the prophylactic use of Rh D immunoglobulin in pregnancy care
(excluding non-invasive prenatal testing (NIPT))



FMH, fetomaternal haemorrhage; Ig, immunoglobulin; IU, international units; IV, intravenous.
anti-D - refers to circulating antibodies; *RHD* - refers to genotype; Rh D positive/negative - refers to blood type.

This care pathway is a snapshot of the clinical guidance contained within the *Guideline for the prophylactic use of Rh D immunoglobulin in pregnancy care*. This version of the care pathway does not include guidance related to the use of non-invasive prenatal testing (NIPT). An alternative care pathway that includes the use of NIPT is available at https://www.blood.gov.au/anti-d-o

This pathway is designed to be adapted to meet the needs and operations of individual organisations.

Adapted from NSW Health (2015)

QML Pathology

Specialists in Private Pathology since the 1920s

30 August 2021

Dear Doctor

Important Information: Thyroglobulin Antibodies (TgAb)

From September 2021, QML Pathology will change our TgAb assay to a new Siemens TgAb method.

What's New

The new Siemens TgAb assay is standardized to the WHO IRP, Anti-Thyroglobulin Serum, Human (NIBSC 65/093), and reports results in IU/mL. The results of the new assay will be significantly different when compared to the current assay.

Change in TgAb cut-off

- Current TgAb assay cut-off is 60 IU/mL
- New Siemens TgAb assay cut-off is 4.6 IU/mL
- For monitoring purposes, we will re-baseline TgAb results when co-requested with a thyroglobulin or if a previous thyroglobulin has been reported within the last 24 months.

Sample Pathology Report with Re-Baselining

Date	26/05/18	26/05/19	26/05/21	25/08/21	
Time	12:31	12:32	12:33	09:55	
Lab No	67000003	67000004	67000005	67000000	
TSH	3.1	3.6	2.5	1.00	mIU/L (0.50-4.00)
free T4	12		11	14	pmol/L (10-20)
free T3	5.2		6.4	5.6	pmol/L (2.8-6.8)
Thyroglobulin Ab			75	70	IU/mL (< 60)
Thyroglobulin AbII				5.2	IU/mL (< 4.6)
Thy. Peroxidase Ab			100	105	IU/mL (< 60)
Thyroglobulin			10.0	10.8	ug/L (< 44.0)
			(after Total Thyroidectomy Tg < 1.0)		

Please note that as of September 2021, QML Pathology changed to a reformulated Atellica Thyroglobulin Antibody (TgAbII) assay. The reference interval has been updated. Differences in individual patient results may be observed compared to the previous method. If further information is required please contact a Chemical Pathologist on (07) 3121 4444.

For monitoring purposes, thyroglobulin antibody has also been analysed and reported with the previous Atellica assay (TgAb).

If further information is required, please contact Dr Chang or Dr Marshall on on **(07) 3121 4444.**

RCPA NATA

Infectious Diseases Report

GEOGRAPHIC DISTRIBUTION - MAR 2021

ORGANISM	Regions (as per key below)															TOTAL		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	MAR	FEB	JAN
Adenovirus (not typed)	3	22	5	4	2	0	15	0	33	0	36	18	2	2	4	82	26	38
Adenovirus (typing pending)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barmah Forest virus	0	2	1	1	1	0	3	0	4	1	3	5	1	3	7	21	7	4
Bordetella pertussis	2	8	4	4	0	0	6	0	6	2	9	6	1	2	2	17	20	15
Brucella species	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campylobacter jejuni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia pneumoniae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia trachomatis, not typed	97	291	160	45	8	0	385	1	202	105	612	169	81	112	79	886	737	724
Coxiella burnetii	0	7	1	2	0	0	2	0	2	3	5	7	8	4	3	26	9	9
Cryptococcus species	0	1	0	0	0	0	3	0	1	0	4	3	0	1	2	8	2	5
Cytomegalovirus (CMV)	7	28	8	1	0	0	16	0	9	3	28	11	2	5	5	43	43	37
Entamoeba histolytica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enterovirus - not typed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Epstein-Barr virus (EBV)	13	45	15	4	1	0	59	0	45	11	72	42	6	10	17	129	105	106
Flavivirus unspecified	1	0	0	0	1	0	0	0	0	0	0	0	0	3	0	3	0	2
Hepatitis A virus	2	1	1	0	0	0	1	0	0	0	1	1	0	0	1	6	1	1
Hepatitis B virus	14	29	19	4	2	2	64	1	12	9	184	9	9	5	8	131	134	106
Hepatitis C virus	35	73	55	23	2	0	89	0	69	21	283	54	37	22	32	340	258	197
Hepatitis D virus	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2
Hepatitis E virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Herpes simplex Type 1	45	155	60	23	1	1	158	2	95	16	319	114	26	44	19	396	350	332
Herpes simplex Type 2	22	90	32	10	4	0	57	0	47	8	154	64	19	12	14	210	153	170
Herpes simplex virus - not typed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HIV-1	1	4	1	1	2	0	21	0	1	2	18	1	0	0	0	14	22	16
HTLV-1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1
Human Metapneumovirus	15	9	1	0	0	0	0	0	16	0	13	0	2	2	0	42	13	3
Influenza A virus	0	4	3	0	0	1	4	0	1	0	11	6	1	1	3	16	11	8
Influenza B virus	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	1	2	1
Legionella pneumophila (all serogroups)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Legionella species	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1
Leptospira species	2	1	0	0	1	4	1	1	0	0	1	0	2	2	0	8	5	2
Measles virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mumps virus	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
Mycoplasma pneumoniae	1	20	4	3	0	0	16	0	6	1	22	14	1	4	1	32	27	34
Neisseria gonorrhoeae	10	52	24	9	3	0	65	0	32	10	99	13	6	13	7	133	99	111
Parainfluenza virus	4	22	5	0	0	1	14	0	11	1	27	16	6	9	2	93	12	13
Parvovirus	0	2	1	0	0	0	0	0	1	3	2	2	0	0	1	3	4	5
Pneumocystis carinii	0	2	0	0	0	0	2	0	0	0	0	2	0	1	0	4	1	2
Respiratory Syncytial virus	93	997	385	20	52	1	644	1	2084	91	1540	451	160	86	24	2807	2934	888
Rhinovirus (all types)	94	1001	321	54	48	2	706	1	1749	90	1666	307	147	275	56	3643	2052	822
Rickettsia - Spotted Fever Group	3	0	3	3	0	0	0	0	0	0	1	1	0	0	0	2	6	3
Ross River virus	4	14	7	1	0	1	8	0	12	11	17	13	4	4	15	49	30	32
Rubella virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella paratyphi A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella paratyphi B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella typhi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcus Group A	17	14	8	3	2	5	37	230	9	3	27	20	2	13	11	183	114	104
Toxoplasma gondii	0	11	2	2	0	0	6	0	10	2	16	3	2	2	1	21	23	13
Treponema pallidum	79	57	64	8	23	1	306	6	59	19	258	27	15	83	9	395	324	295
Trichomonas vaginalis	36	7	10	2	5	0	2	3	15	7	35	3	2	22	8	51	61	45
Varicella Zoster virus	39	163	70	14	1	0	132	0	97	29	285	139	20	32	30	402	326	323
Yersinia enterocolitica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	639	3134	1270	241	160	19	2822	247	4628	448	5755	1523	564	774	361	10200	7913	4472

REGIONS:
1 Cairns
2 Gold Coast/Tweed
3 Ipswich
4 Mackay
5 Mount Isa
6 New England
7 North Brisbane
8 Northern Territory
9 Redcliffe
10 Rockhampton
11 South Brisbane
12 Sunshine Coast
13 Toowoomba
14 Townsville
15 Wide Bay/Burnett

FURTHER HISTORICAL CLINICAL DATA CAN BE OBTAINED BY CONTACTING MARKETING ON INFO@QML.COM.AU.

Infectious Diseases Report

GEOGRAPHIC DISTRIBUTION - JUN 2021

ORGANISM	Regions (as per key below)															TOTAL		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	JUN	MAY	APR
Adenovirus (not typed)	3	44	7	2	4	0	31	0	60	2	68	24	2	9	4	109	77	74
Adenovirus (typing pending)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barmah Forest virus	1	2	1	0	0	0	1	0	3	3	1	13	0	2	1	13	12	3
Bordetella pertussis	1	7	3	3	0	0	7	0	5	1	19	5	1	5	5	29	22	11
Brucella species	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campylobacter jejuni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia pneumoniae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia trachomatis, not typed	124	274	160	55	12	0	336	3	178	68	571	153	67	116	66	751	710	722
Coxiella burnetii	2	10	5	4	0	0	5	0	0	5	6	9	6	3	4	20	21	18
Cryptococcus species	0	0	0	0	0	0	1	0	0	0	1	3	0	0	0	1	1	3
Cytomegalovirus (CMV)	6	19	4	5	1	0	15	0	13	1	42	12	5	1	8	43	48	41
Entamoeba histolytica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enterovirus - not typed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Epstein-Barr virus (EBV)	6	57	24	3	0	0	74	0	44	4	113	57	10	13	10	134	151	130
Flavivirus unspecified	0	2	0	0	0	0	0	0	2	0	0	1	0	1	0	2	1	3
Hepatitis A virus	0	0	2	0	0	0	0	0	2	0	0	2	0	0	4	6	3	1
Hepatitis B virus	17	31	20	5	4	0	58	0	9	7	188	10	5	6	7	125	125	117
Hepatitis C virus	36	90	63	20	4	0	116	0	63	18	227	61	41	26	32	308	249	240
Hepatitis D virus	1	1	1	0	0	0	2	0	0	0	1	0	0	0	0	0	3	3
Hepatitis E virus	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	2
Herpes simplex Type 1	27	146	59	20	3	1	184	0	103	20	309	109	33	38	29	378	349	354
Herpes simplex Type 2	19	110	18	12	2	0	83	0	40	7	129	67	14	24	14	169	179	191
Herpes simplex virus - not typed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HIV-1	5	2	3	0	0	0	18	0	0	1	13	1	0	0	1	15	14	15
HTLV-1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	1	2
Human Metapneumovirus	18	204	16	1	0	0	20	0	85	3	167	27	3	35	3	425	117	40
Influenza A virus	0	3	7	0	0	1	6	0	4	2	8	6	3	3	2	15	13	17
Influenza B virus	0	0	1	0	0	0	2	0	0	0	2	0	0	3	1	3	3	3
Legionella pneumophila (all serogroups)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Legionella species	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1
Leptospira species	1	1	0	0	0	11	0	2	0	0	1	5	5	3	0	8	12	9
Measles virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mumps virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycoplasma pneumoniae	2	18	7	1	0	0	13	0	9	1	35	9	2	4	4	35	29	41
Neisseria gonorrhoeae	18	43	16	9	2	0	43	0	36	12	91	13	6	20	3	112	98	102
Parainfluenza virus	9	212	56	4	6	0	89	0	337	12	311	51	16	8	6	707	307	103
Parvovirus	0	1	0	0	0	0	3	0	0	1	2	6	1	1	3	7	6	5
Pneumocystis carinii	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	4
Respiratory Syncytial virus	13	77	28	5	4	0	66	0	189	21	118	72	14	36	13	53	154	449
Rhinovirus (all types)	137	1718	511	89	63	2	1166	4	3251	232	3031	522	222	436	125	4988	4523	1998
Rickettsia - Spotted Fever Group	0	0	0	1	0	0	3	0	0	0	1	4	0	0	0	3	2	4
Ross River virus	3	25	13	6	0	0	22	0	29	18	28	85	4	7	19	96	105	58
Rubella virus	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
Salmonella paratyphi A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella paratyphi B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella typhi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcus Group A	17	17	9	6	2	6	39	240	11	10	35	16	4	26	8	153	139	154
Toxoplasma gondii	2	6	3	1	0	0	8	0	4	0	8	1	2	1	1	9	11	17
Treponema pallidum	73	67	50	8	18	0	354	7	72	25	261	45	24	85	13	384	360	358
Trichomonas vaginalis	39	13	19	1	7	0	4	2	11	7	29	5	3	30	5	57	59	59
Varicella Zoster virus	32	159	61	14	5	0	150	0	99	16	274	114	30	24	19	344	326	327
Yersinia enterocolitica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	612	3362	1168	275	137	21	2923	260	4661	497	6092	1510	523	966	410	9505	8231	5681

REGIONS:
1 Cairns
2 Gold Coast/Tweed
3 Ipswich
4 Mackay
5 Mount Isa
6 New England
7 North Brisbane
8 Northern Territory
9 Redcliffe
10 Rockhampton
11 South Brisbane
12 Sunshine Coast
13 Toowoomba
14 Townsville
15 Wide Bay/Burnett

FURTHER HISTORICAL CLINICAL DATA CAN BE OBTAINED BY CONTACTING MARKETING ON INFO@QML.COM.AU.

Healius Pathology Pty Ltd (ABN 84 007 190 043) t/a QML Pathology PUB/MR/001 (Aug 21)