

UNIT NO. 2

INFECTIOUS DISEASES ACT AND ON-LINE NOTIFICATIONS OF INFECTIOUS DISEASES

Contributed by Communicable Diseases Division, Ministry of Health

ABSTRACT

The Infectious Diseases Act (IDA), which was enacted by Parliament in 1976 and came into force on 1 August 1977, is the principal piece of legislation that deals with the prevention and control of infectious diseases in Singapore. For the control of infectious diseases in Singapore, the IDA provides for the notification of specified infectious diseases. Notifications of infectious diseases is an important strategy allowing MOH to monitor and detect occurrences of infectious diseases, so that prompt epidemiological actions can be taken to institute control and prevention measures, to prevent further transmission of the disease, or to alleviate an outbreak. Under the Infectious Diseases (Notification of Infectious Diseases) Regulation 2008, notification of an infectious disease should be given by facsimile transmission (fax) or through the electronic notification system.

SFP2011; 37(2): 13-17

BACKGROUND

The Infectious Diseases Act (IDA), which was enacted by Parliament in 1976 and came into force on 1 August 1977, is the principal piece of legislation that deals with the prevention and control of infectious diseases in Singapore. This legislation is jointly administered by the Ministry of Health (MOH) and the National Environment Agency (NEA).

For the control of infectious diseases in Singapore, the IDA provides for the notification of specified infectious diseases. Notification of infectious diseases is an important strategy allowing MOH to monitor and detect occurrences of infectious diseases, so that prompt epidemiological actions can be taken to institute control and prevention measures, to prevent further transmission of the disease, or to alleviate an outbreak. Under the Infectious Diseases (Notification of Infectious Diseases) Regulation 2008, notification of an infectious disease should be given by facsimile transmission (fax) or through the electronic notification system.

The information collated from the notifications is then analysed and fed back to the medical practitioners in various forms, including weekly online news bulletins, quarterly Epidemiological News Bulletins, as well as the annual communicable diseases surveillance report. For regular updates of local and regional outbreak situations which are constantly evolving, medical practitioners can even log on to the online Communicable Diseases Live & ENhanced Surveillance (CDLENS) programme. In this way, they can be kept up-to-date with regard to the latest incidence and epidemiology of infectious diseases, thus aiding them in the screening, diagnosis and management of their patients.

All publications are freely available for viewing on the MOH internet webpage. For CDLENS, medical practitioners will have to log on with their Singapore Medical Council (SMC) assigned ID and password, or their own Singpass. Examples of the various publications, as well as a screen capture of the CDLENS can be found in Annex A.

On-Line Notification of Infectious Diseases

The widespread use of the internet in Singapore has become increasingly apparent in recent years. In 2008, 76% of households in Singapore were reported to have access to Internet, up from 71% in 2006. Significant progress has also been made in the development of IT tools and programmes to improve, modernise and transform the way medicine is practiced. These tools and programmes include the Health Professionals Portal, the MOH Communicable Diseases Live & ENhanced Surveillance (CDLENS), MOH MedAlert, the Clinical Management System (CMS) and the Electronic Licence Application (eLA).

As at 17 Dec 2010, there were more than 2000 general and specialist clinics licensed under the Private Hospitals & Medical Clinics (PHMC) Act. Every clinic has provided an email address for the purpose of the MOH MedAlert. Furthermore, based on the enrolment of GP clinics for the Chronic Disease Management Programme (CDMP), at least 46% of all GP clinics had computers and Internet access.

It is with this trend in mind, as well as the other potential benefits which can be reaped, that MOH encourages doctors to submit notifications of infectious diseases online.

Problems with Fax Notifications

With online notification of infectious diseases, the following problems currently encountered will be overcome.

Data Content

Fax notifications contributed to the problem of incomplete data submission. The notifying doctor is contacted to verify relevant information as a result of missing data or illegible handwriting. This is not productive, and is time-consuming on the doctors' part as well.

Data Security

There have been incidents of reporting physicians submitting their fax notifications to the wrong locations. Although these incidents were rare, potentially sensitive patient information could have been compromised as a result of a system which is prone to human error. This potential breach of patient confidentiality also left the medical practitioner liable for litigation.

Timeliness of outbreak information

In 2009, MOH received a total of 45,609 infectious disease notifications. 68.3% of notifications were made via fax, and almost 80% of fax notifications received were from the private sector. During the H1N1 pandemic, there was a sharp increase in notifications from an average of about 4,400 per month in 2008 to about 5,500 per month in June and July 2009. The fax transmission resulted in a delay in data entry, collation and analysis of outbreak information. Further delay resulted when additional time and effort was taken to verify information as a result of missing data / illegible handwriting.

Consultation with Professional Bodies

Professional bodies, namely the Singapore Medical Association (SMA), College of Family Physicians, Singapore (CFPS) and Singapore Medical Council (SMC), were consulted and were cognizant of the need to embrace on-line notification.

Promotion of On-Line Notification of Infectious Diseases

MOH will continue to work with the CFPS and SMA to encourage doctors to make use of the CDLENS to submit notifications of infectious diseases. In line with these efforts, MOH together with CFPS, will engage doctors through workshops like the Family Practice Skills Course. This will be conducted for private sector doctors to increase awareness of and to provide training on the use of on-line services.

CONCLUSION

Under the current climate of increasing internet use by the general population and increased availability of relevant IT solutions, the use of IT in the practice of medicine in Singapore is a definite eventuality. Therefore, it would be opportune for the doctors to support the use of on-line notification which benefits both doctors as well as MOH in enabling prompt and appropriate public health response.


LEARNING POINTS

- **Notifications of infectious diseases is an important strategy allowing MOH to monitor and detect occurrences of infectious diseases.**
 - **For regular updates of local and regional outbreak situations which are constantly evolving, medical practitioners can even log on to the online Communicable Diseases Live & ENhanced Surveillance (CDLENS) programme.**
 - **For CDLENS, medical practitioners will have to log on with their Singapore Medical Council (SMC) assigned ID and password, or their own Singpass.**
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ANNEX A

MOH weekly publication of statistics on local infectious disease situation

Available online at <http://www.moh.gov.sg/mohcorp/statisticsweeklybulletins.aspx>



MINISTRY OF HEALTH
SINGAPORE

VOL. 7 NO.41 2010

<http://www.moh.gov.sg/mohcorp/statisticsweeklybulletins.aspx>
Published by the Communicable Diseases Division

WEEKLY INFECTIOUS DISEASE BULLETIN
EPIDEMIOLOGICAL WEEK 41 10 - 16 Oct 2010

	E Week 41			Cumulative first 41 Weeks		
	2010	2009	Median 2005-2009	2010	2009	Median 2005-2009
FOOD/WATER-BORNE DISEASES						
Campylobacteriosis	7	11	6	265	210	167
Cholera	0	0	0	1	3	1
Paratyphoid	3	0	1	34	23	20
Polymyelitis	0	0	0	0	0	0
Salmonellosis (non-enteric fevers)	33	24	9	1229	886	306
Typhoid	0	3	1	63	56	58
Viral Hepatitis A	0	0	2	40	72	72
Viral Hepatitis E	0	0	0	95	76	33
VECTOR-BORNE DISEASES						
Chikungunya Fever	1	4	NA	26	314	NA
Dengue Fever	147	54	154	4212	3702	4960
Dengue Haemorrhagic Fever	0	0	1	32	42	67
Malaria	2	2	2	158	151	136
Nipah virus infection	0	0	0	0	0	0
Plague	0	0	0	0	0	0
Yellow Fever	0	0	0	0	0	0
AIR/DROPLET-BORNE DISEASES						
Avian Influenza	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
Encephalitis	2	1	1	24	34	31
Haemophilus Influenzae B infection	0	0	0	4	3	3
Hand, Foot And Mouth Disease	710	391	391	26725	12623	13513
Legionellosis	0	1	0	19	18	18
Measles	1	0	0	43	0	16
Melioidosis	0	2	2	53	26	52
Meningococcal Disease	0	0	0	6	1	1
Mumps	6	9	20	367	552	656
Pertussis	0	0	0	4	12	19
Pneumococcal Disease (invasive)	2	2	NA	231	202	NA
Rubella	0	3	2	143	135	115
Severe acute respiratory syndrome	0	0	0	0	0	0
OTHER DISEASES						
Viral hepatitis B	1	2	2	48	54	59
Viral hepatitis C	8	0	0	12	3	12
POLYCLINIC ATTENDANCES						
Acute upper respiratory infections	13413	11904	11504	607520	502130	520137
Acute conjunctivitis	541	383	568	21033	19023	26961
Acute Diarrhoea	2349	2151	2151	91272	87036	87596
HIV/STI/TB NOTIFICATIONS*						
HIV/AIDS	2010	Sep		Cumulative 2010		
Legally Notifiable STIs**	49			335		
Tuberculosis	504			5070		
	123			1194		

MOH Epidemiological News Bulletin (quarterly)

Available on-line at: <http://www.moh.gov.sg/mohcorp/publicationsnewsbulletins.aspx>



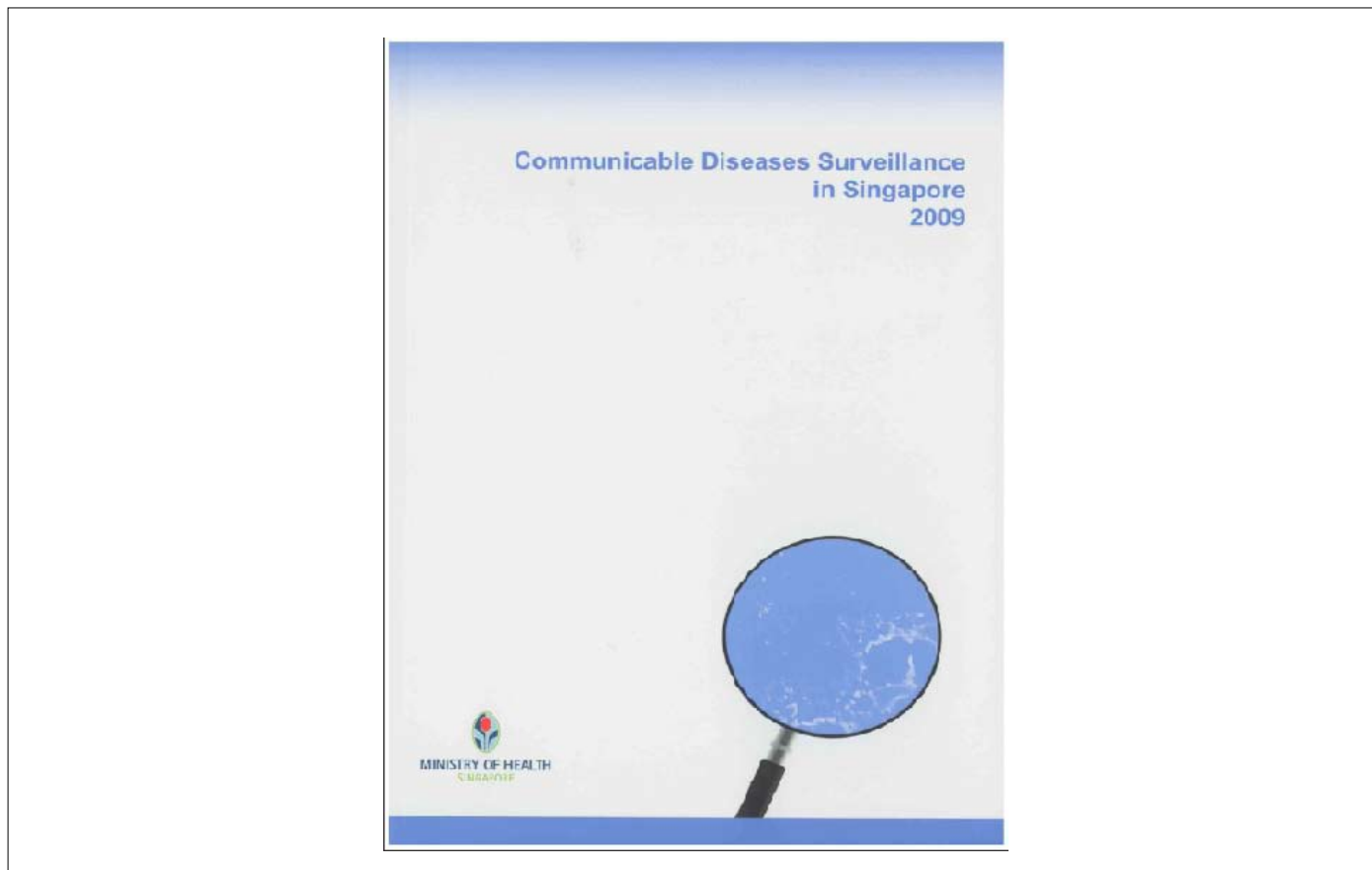
Epidemiological News Bulletin
QUARTERLY

36th year of publication

JULY - SEPTEMBER 2010 VOL. 36 NO. 3 A PUBLICATION OF THE MINISTRY OF HEALTH, SINGAPORE

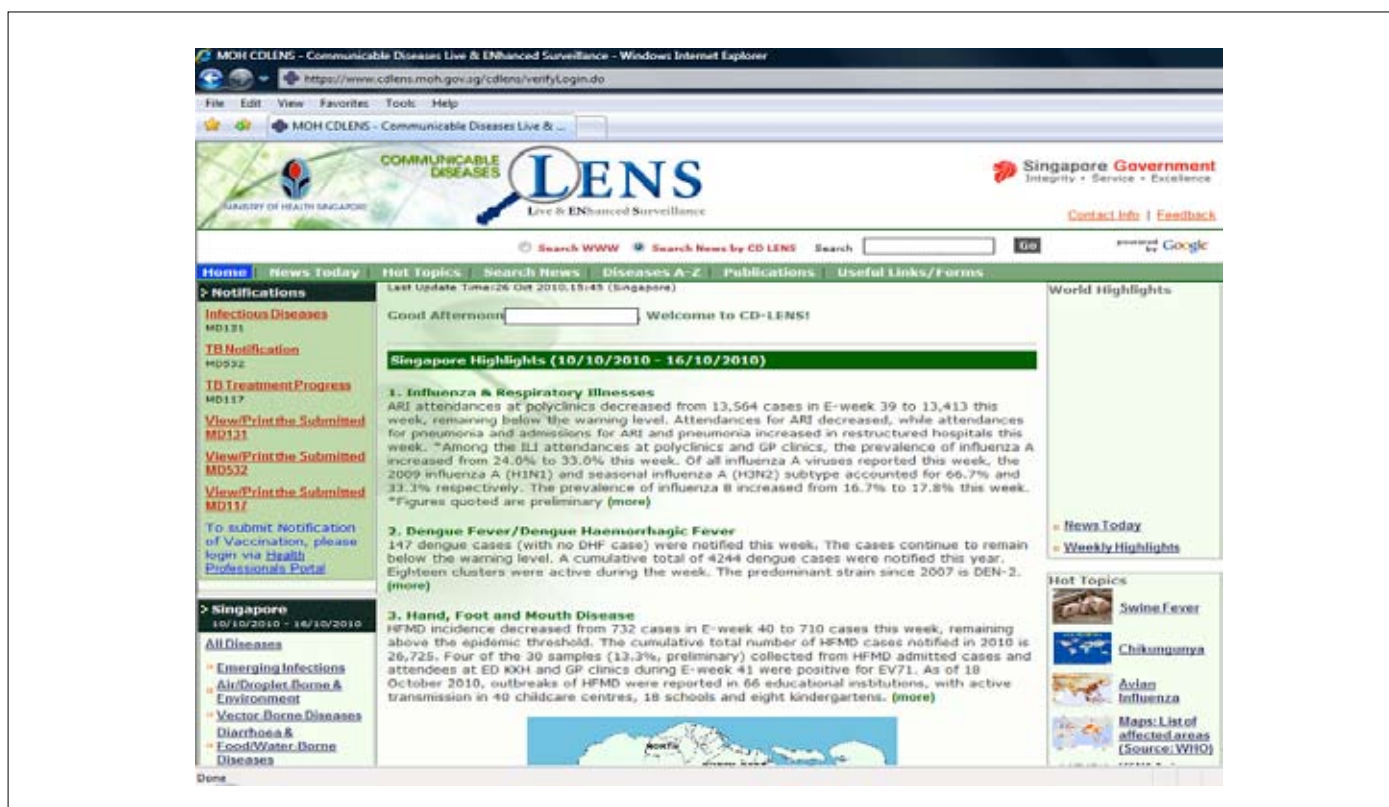
MOH Communicable Diseases Surveillance Report (annual)

Available online at: <http://www.moh.gov.sg/mohcorp/publicationsreports.aspx>



MOH Communicable Diseases Live & Enhanced Surveillance (CDLENS)

<http://www.cdLens.moh.gov.sg/cdLens>



FAQs

1. How can I go about setting up internet access in my clinic?

If the doctor requires assistance in obtaining the necessary equipment and internet service for his clinic, he can provide his name and contact details to moh_ens@moh.gov.sg, call 1800-3258451 or complete the following enquiry form to be faxed to 62215538 before June 2011 and MOH would put him in touch with a vendor.

Alternatively, the doctor may explore the IT market to make purchases from vendors who can offer the best deals in town.

IT Enquiry Form for General Practitioners

(To be faxed before June 2011)

Date : _____

Communicable Diseases Division

Ministry of Health

I would like to seek MOH's assistance in getting me in touch with a vendor to obtain the necessary equipment and internet service for my clinic.

Name of Doctor : _____

Name of Clinic : _____

Clinic Address : _____

Clinic telephone number : _____

Handphone number : _____

Please fax the completed form to 62215538 or email us at moh_ens@moh.gov.sg or call us at 1800 - 3258451.

2. It is much more expensive to subscribe to internet service commercially than personally to make the notification on-line. Is there a solution to address this?

Personal mobile broadband services are currently available at affordable rates. Doctors may wish to consider subscribing to such services for making notification online. There is no restriction on the use of personal broadband in the clinic environment.

3. Has MOH developed any electronic clinic management system through which notification of infectious diseases can be integrated and thus making the workflow process more streamlined?

MOH has not developed any such clinic management system. However, there are 2 Clinic Management System (CMS) currently available from 2 private companies: Crimson-Logic and Frontline. GPs could use this system for the day-to-day running of their clinics, and as an added advantage, the system also has the ability to directly interface with CDLENs, CDMP (chronic diseases management programme) and NIR (National Immunization Registry), thus making it more convenient for GPs to notify MOH of infectious diseases and HPB of vaccinations etc, via the internet. You can obtain further information on the CMSs by writing to:

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christina.tan@bt.com
HP: 81008810