



Feature:
Update on norovirus activity

LENS ON CHP



Above: Dr Chris Skelly introducing Spatial epidemiology at a special guest lecture on June 26, 2006.

NEWS

Lecture on Spatial epidemiology

On June 26, 2006, 43 public health professionals from various sectors participated in a special guest lecture on Spatial epidemiology organized by CHP. Dr Chris Skelly, a professional geographer from the Institute for the Environment of Brunel University, shared his expertise in applying geographic information system and spatial epidemiology to disease surveillance. The lecture covered general concepts about spatial epidemiology, details of key techniques, as well as illustrated applications in different areas of infectious disease surveillance, investigation and control.

(continued on page 54)

Update on norovirus activity

Reported by DR RAYMOND YUNG, Head, Infection Control Branch, DR RITA HO, Senior Medical Officer, DR MANNY LAM, Medical Officer, Surveillance and Epidemiology Branch, CHP.

The Centre for Health Protection (CHP) previously reported unusual seasonal activity of norovirus in a past issue of CDW (Vol.3 No.12 http://www.chp.gov.hk/files/pdf/CDW_V3_12.pdf). Here we provide an update on the recent situation of norovirus gastroenteritis outbreaks, genetic analysis of norovirus strain, and the preventive and control measures implemented.

Gastroenteritis caused by norovirus can occur throughout the year but is usually more common in winter months. In Hong Kong, norovirus activity usually peaks during November through February. This year, an upsurge of norovirus associated gastroenteritis was reflected in different surveillance systems during May and June.

Table 1 shows the number of laboratory confirmed norovirus outbreaks in different local institutions. During May 1 through July 11, CHP received 97 outbreak reports of institutional norovirus gastroenteritis affecting 1080 persons. Residential care homes for the elderly (RCHE) and hospitals accounted for 68 and 27 outbreaks respectively. Most patients experienced mild symptoms and did not require hospitalization.

Table 1 - Confirmed norovirus outbreaks in various settings in 2006 (as of July 11).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Total
Elderly home	5	4	5	5	21	36	11	87
Hospital	1	0	4	2	2	18	7	34
Primary/ Secondary School	1	2	2	0	0	0	0	5
Child care centre	0	0	1	0	0	0	0	1
Other institutions	0	1	0	0	1	0	1	3
Total	7	7	12	7	24	54	19	130

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Data from the sentinel surveillance system based at RCHE recorded a comparable trend in acute diarrhoeal diseases among residents (Figure 1). In the first four months of 2006, the number of acute diarrhoeal episodes was between 0.2 and 0.6 per 1000 resident-days. A rising trend was observed since May with a maximum reached at 1.2 per 1000 resident-days recorded in the week ending on June 17 (Week 24).

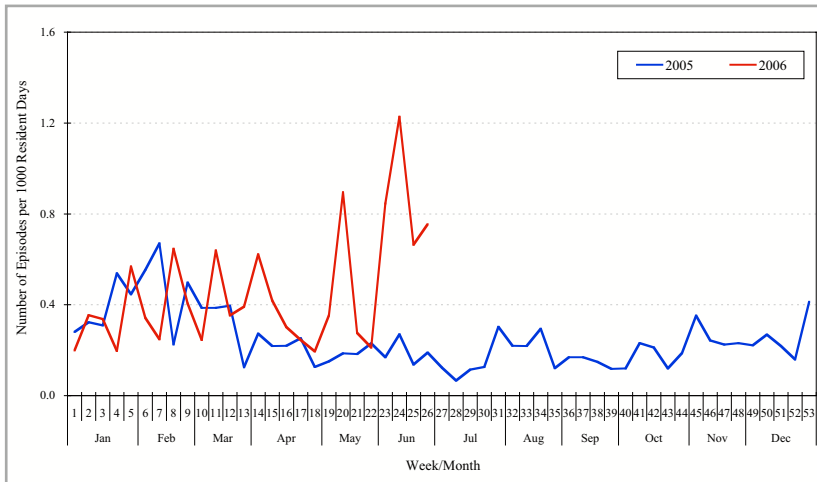


Figure 1 - Number of acute diarrhoeal disease episodes per 1000 resident-days in residential care homes for the elderly, 2005 - 2006.

The sentinel surveillance system of acute diarrhoeal diseases based at out-patient settings also showed a rise in recent weeks. The consultation rate of acute diarrhoeal diseases recorded by private doctors (GP) increased from 28.1 per 1000 consultations in the week ending on June 10 (Week 23) to 40.8 per 1000 consultations in the week ending June 24 (Week 25) (Figure 2). Among general out-patient clinics (GOPC), consultation rate of acute diarrhoeal diseases increased from 4.7 to 7.7 per 1000 consultations in the same period (Figure 3).

Interestingly, schools and child care centres did not show increase in occurrence of diarrhoea and vomiting during May and June.

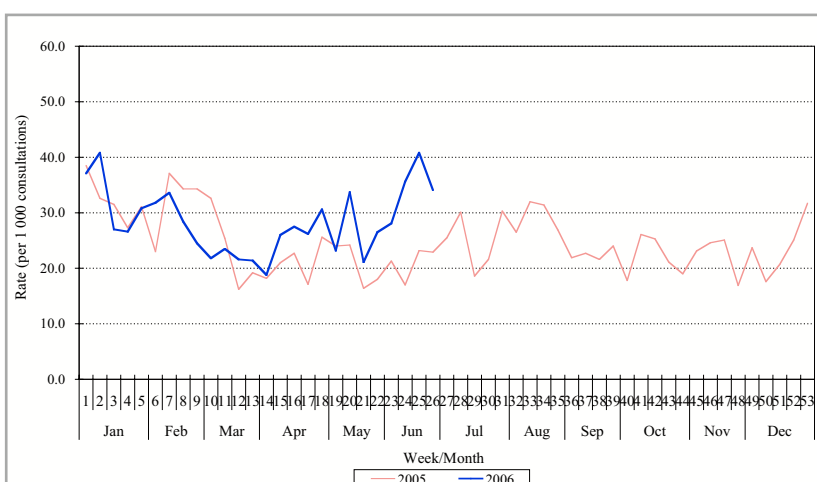


Figure 2 - Consultation rate of acute diarrhoeal disease among sentinel GP.

Genetically, noroviruses can be classified into 5 genogroups, which in turn are further divided into at least 20 genetic clusters. Genetic sequencing of noroviruses collected from outbreaks during May and June in Hong Kong showed a consistent norovirus genogroup II variant strain. This newly

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Legionnaires' disease

On June 28, 2006, CHP received notification of a confirmed case of Legionnaires' disease (LD) involving a 69-year-old man living in Aberdeen. This is the ninth LD case reported to CHP in 2006. The patient had fever onset on June 9 and other symptoms including chills and rigor, productive cough, shortness of breath and myalgia. His symptoms persisted after seeing a general practitioner and he was hospitalized on June 16. Chest X-ray showed bilateral lung infiltrate and *Legionella pneumophila* serogroup 1 antigen was detected in his urine. Paired sera taken on June 16 and June 26 showed a four-fold increase in antibody titre against *Legionella pneumophila* by immunofluorescence assay. The patient was a chronic smoker and had history of traveling to Mainland China before onset of symptoms. He is in critical condition and all his home contacts are asymptomatic.

A case of human myiasis reported

CHP received report of a local case of human myiasis on June 26, involving an 88-year-old elderly home resident in Sheung Shui. She had history of long-standing scalp wound for a few years. On June 26, the scalp bled after scratching. She attended the North District Hospital and maggots of *Cyclorhapha* suborder were found in the wound. She remained in stable condition after wound debridement. In 2006, six cases of human myiasis were reported to CHP so far, of which 4 were infested with *Chrysomya bezziana*, one of the commonest myiasis-causing species of this suborder.

(continued on page 55)

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RISK COMMUNICATION DIGEST

Press release	#
Food poisoning	3
Noroviral gastroenteritis	2
Tripartite meeting	2
Dengue fever	1
Travel health advice	1
Human avian flu	1
Human myiasis	1
Legionnaires' disease	1
Letter to doctors	
Noroviral gastroenteritis	1
Letter to institutions	
Noroviral gastroenteritis	1
Media interview	
Noroviral outbreaks	3
Dengue fever	1
Media stand-up	
Tripartite meeting	2
Noroviral outbreaks and food poisoning	2
H5NI mutated in Indonesia	1
Press conference	
Travel health advice	1
Tripartite meeting and signing an agreement of cooperation	1

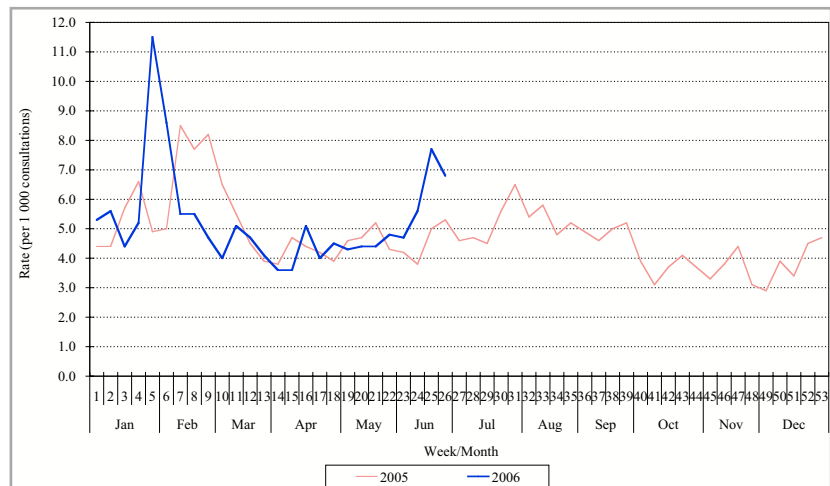


Figure 3 – Consultation rate of acute diarrhoeal disease among sentinel GPC.

emerged variant was different from those identified in recent past years, and further characterization of the new strain will be undertaken.

This year, unusual seasonal patterns of norovirus activity were also reported in some overseas countries. In the United Kingdom, the norovirus season was extended into the summer, with an increasing proportion of outbreaks caused by a new variant of the genogroup II.4 strain. This new variant, which is characterized by conserved amino acid changes within the virus capsid, was first detected in December 2005. This new variant was also reported in outbreaks in the Netherlands, France, and Denmark. More detailed genetic information from the European strains will be gathered for comparison with those found in Hong Kong.

On the hospital front, the Hospital Authority enhanced infection control measures to contain the outbreaks in hospitals. Affected patients were isolated or cohorted in special areas. Access to affected areas was restricted. Cleansing and disinfection were stepped up in patient areas. Guidelines on management were updated and promulgated to staff via different channels via

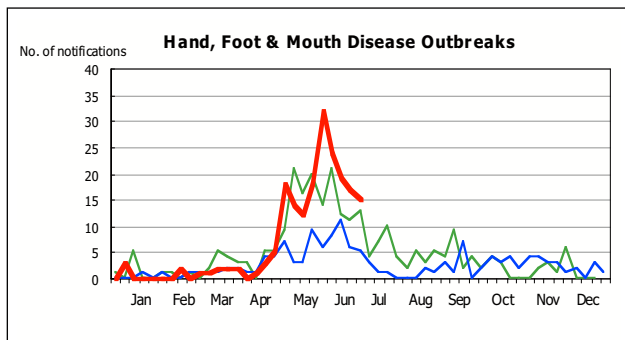
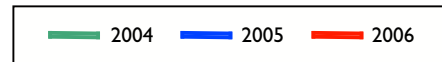
poster, signage and staff newsletter. Hand hygiene was emphasized. Staff stayed vigilant attending to all patients with vomiting and diarrhea and managed their vomitus and excreta with care. A special enhanced surveillance program was implemented in all hospitals to monitor the activity of norovirus among newly admitted patients with compatible symptoms. Educational seminars for public and private health care workers were organized to share experience in outbreak control.

On the community front, the Department of Health worked with stakeholders to coordinate territory-wide efforts in controlling norovirus outbreaks. An Inter-departmental Coordinating Committee on Noroviral Gastroenteritis¹ was established to monitor the latest situation and to map out territory-wide strategies and control measures. Letters were sent to all RCHEs, child care centres, kindergartens and schools alerting them of the increase of norovirus outbreaks and proper management of vomitus and excreta. Health education to RCHE staff was strengthened with emphasis on norovirus prevention. The management of institutions was reminded to carry out proper infection control procedures and report outbreaks according to CHP guidelines. An annual refresher training programme on infection control for RCHE staff starts during the week of July 10, 2006.

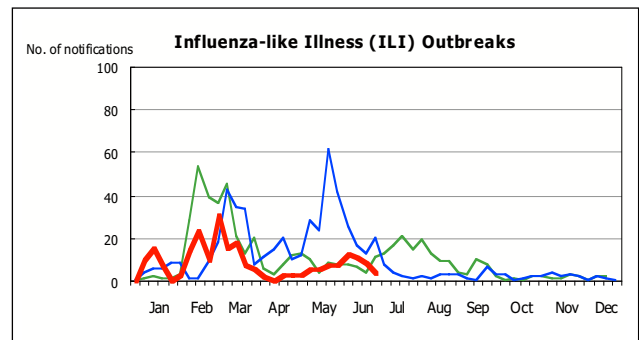
Updated information and advice on norovirus infection can be accessed from CHP's newly created "Norovirus Infection Page" at <http://www.chp.gov.hk>.

¹ The Inter-departmental Coordinating Committee on Noroviral Gastroenteritis comprises of representatives from the Department of Health, Social Welfare Department, Education and Manpower Bureau, Food and Environmental Hygiene Department, Information Services Department and Hospital Authority.

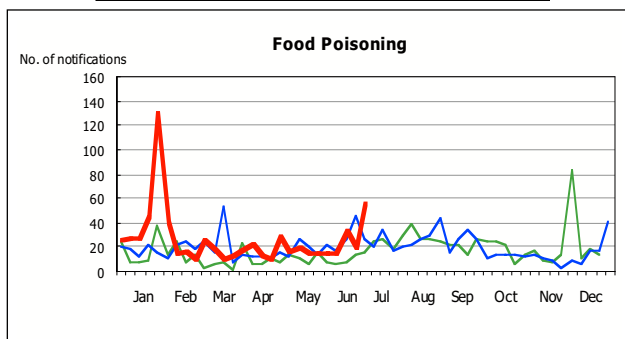
SUMMARY OF SELECTED NOTIFIABLE DISEASES AND OUTBREAK NOTIFICATIONS (WEEKS 26 - 27)



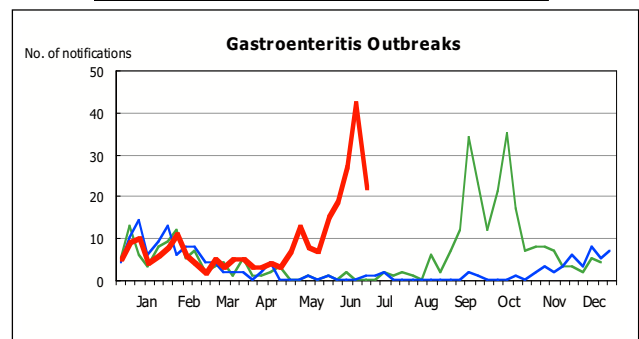
Week 24:	24	Week 26:	17
Week 25:	19	Week 27:	15



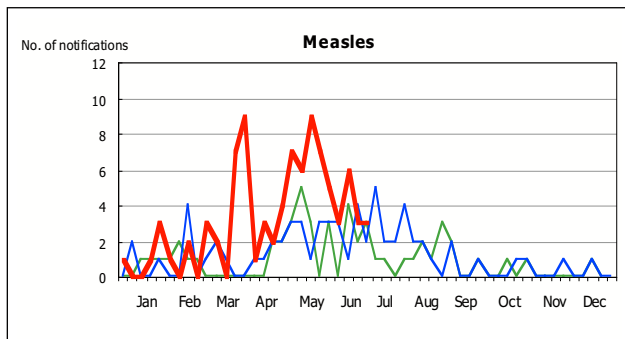
Week 24:	13	Week 26:	8
Week 25:	11	Week 27:	4



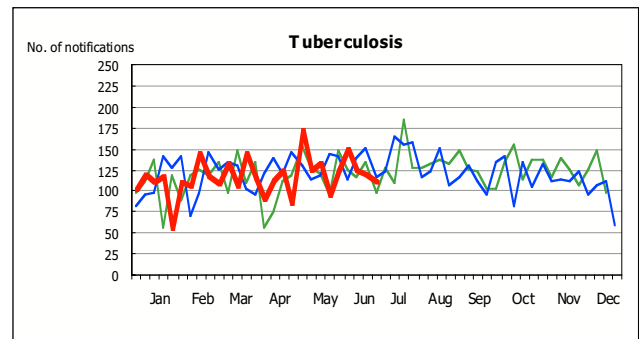
Week 24:	15	Week 26:	19
Week 25:	33	Week 27:	55



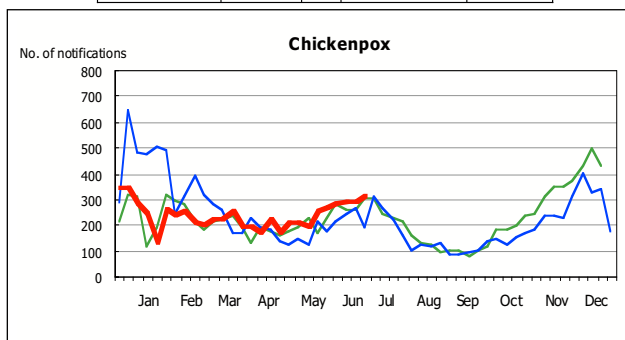
Week 24:	19	Week 26:	42
Week 25:	27	Week 27:	22



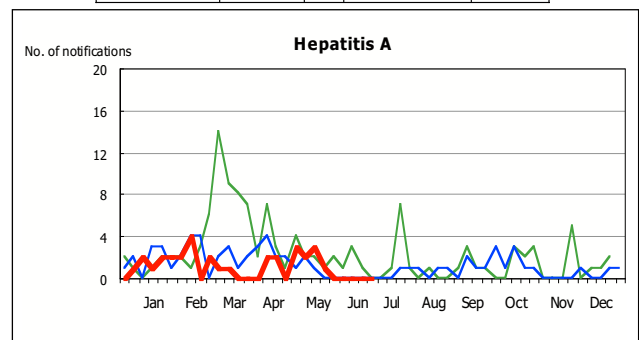
Week 24:	3	Week 26:	3
Week 25:	6	Week 27:	3



Week 24:	149	Week 26:	120
Week 25:	124	Week 27:	109



Week 24:	286	Week 26:	290
Week 25:	292	Week 27:	315



Week 24:	0	Week 26:	0
Week 25:	0	Week 27:	0

Data contained within this bulletin is based on information recorded by the Central Notification Office (CENO) and Public Health Information System (PHIS) up until July 8, 2006. This information may be updated over time and should therefore be regarded as provisional only.