The VIDRL Norovirus Report
April 2013

Available at: www.vidrl.org.au

Background

The noroviruses are the most common cause of outbreaks of non-bacterial gastroenteritis as well as being an important cause of sporadic gastroenteritis. Although norovirus-associated gastroenteritis was once referred to as "winter vomiting disease", it is now known that norovirus-associated gastroenteritis occurs throughout the year. Furthermore, a recent study of norovirus outbreaks in Victoria over the period 2001-2010 showed that there had been a dramatic increase in norovirus outbreaks in the period 2006-2010 compared to 2001-2005.[1]

The available evidence indicates this increase was not a function of enhanced surveillance procedures but most probably related to the emergence of more virulent strains of norovirus and also to environmental conditions which facilitated the spread of the virus. This report, based on laboratory detections of norovirus and general practitioner gastroenteritis presentations, is intended to provide an indication of norovirus and gastroenteritis activity in Victoria.

Summary

Routine testing at the Victorian Infectious Diseases Reference Laboratory (VIDRL) includes detections of norovirus from outbreaks and sporadic cases. Because testing tends to focus on gastroenteritis outbreaks in aged-care facilities, detection of norovirus may be biased towards older age groups. The number of norovirus detections decreased in April, predominantly in the 50-79 and 80+ age groups (Figure 1). The fall in number of detections in April shows the current cycle of norovirus activity has peaked.

The Melbourne Medical Deputising Service (MMDS), an out-of-hours general practitioner locum service, provides data on gastroenteritis-like illness consultations. By the end of April the rate of gastroenteritis per 1000 consultations had fallen to its lowest rate this year (49.13) (Figure 2). As seen previously rates were highest in the 18-<65 year old age group.

These data suggest that the higher than normal gastroenteritis activity in the past three months in Victoria has now declined. The increase in activity observed in late 2012 may be due to the emergence of the genotype II.4 2012 Sydney variant. Increases in norovirus activity due to this genotype have been recorded in the United Kingdom, France, Denmark and New Zealand [2, 3, 4].

[1] LD Bruggink, K Sturge, J Gaston, J Gregory, MG Catton, JA Marshall *Patterns of norovirus-associated gastroenteritis outbreaks in Victoria 2001–2010* Victorian Infectious Diseases Bulletin Volume 14 Issue 3 September 2011

[2] van Beek J, Ambert-Balay K, Botteldoorn N, Eden JS, Fonager J, Hewitt J, Iritani N, Kroneman A, Vennema H, Vinjé J, White PA, Koopmans M, on behalf of NoroNet. Indications for worldwide increased norovirus activity associated with emergence of a new variant of genotype II.4, late 2012. Euro Surveill. 2013;18(1):pii=20345. Available online: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20345

[3] Fonager J, Hindbæk LS, Fischer TK. Rapid emergence and antigenic diversification of the norovirus 2012 Sydney variant in Denmark, October to December, 2012. Euro Surveill. 2013;18(9):pii=20413. Available online: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20413

[4] Bennett S, MacLean A, Miller RS, Aitken C, Gunson RN. Increased norovirus activity in Scotland in 2012 is associated with the emergence of a new norovirus GII.4 variant. Euro Surveill. 2013;18(2):pii=20349. Available online: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20349

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Figure 1: Norovirus detections by age group and year, VIDRL, January 2003 – April 2013

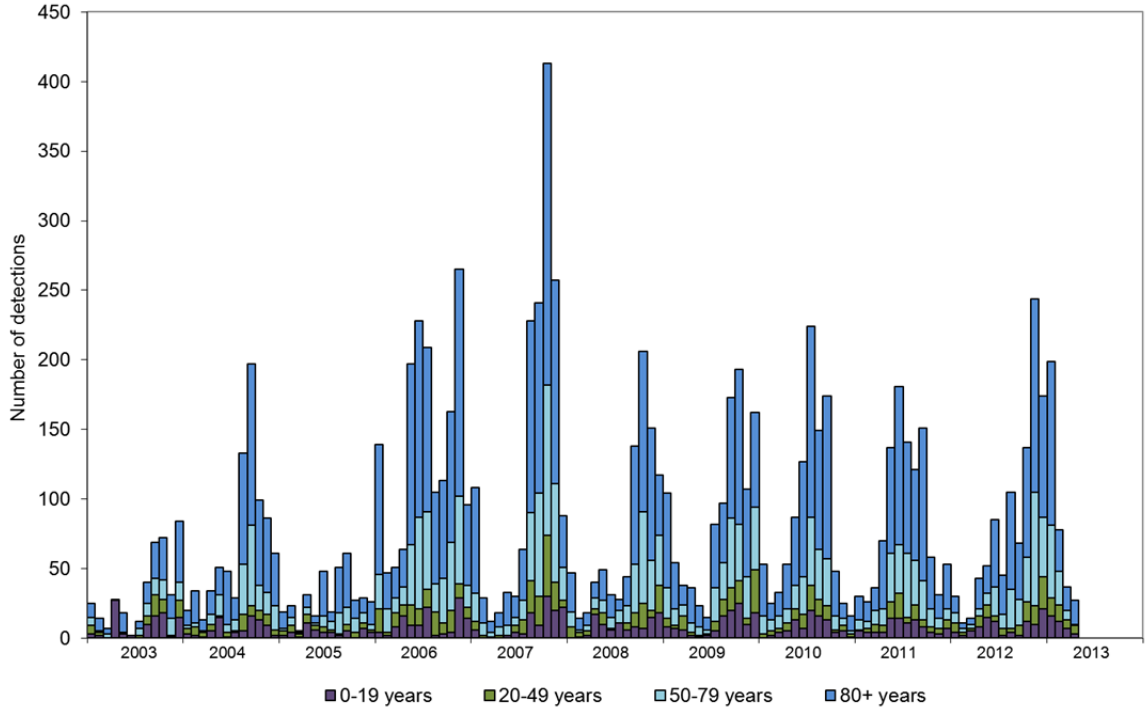

Figure 2: Numbers and rates of gastroenteritis consultations, MMDS, January 2003 – April 2013