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My Patient Has Been Exposed To HIV - What Can I Do?

If you have conducted a risk assessment and think your patient has had a high risk exposure to HIV within the previous 72 hours then you should refer them for non-occupational post-exposure prophylaxis (NPEP) as soon as possible. For example, the patient:

- is a gay man who has had unsafe sex or the condom broke while having sex with a known or suspected HIV-positive man
- is the HIV-negative partner in a sero-discordant couple (i.e. their sex and/or injecting partner is HIV-positive) and the condom broke or they have shared injecting equipment
- has had unsafe sex with a person from a country with high HIV prevalence.

NPEP is a course of anti-retroviral drugs (e.g. Truvada® [300mg Tenofovir and 200mg Emtricitabine] once daily for four weeks) that should be commenced as soon as possible (and definitely within 72 hours), following exposure to HIV. NPEP may help reduce the risk of HIV transmission after unsafe sex, sharing of injecting equipment or a needle-stick injury when it is known or likely that there has been a high risk of exposure.

NPEP is available from:

- Royal Perth Hospital Sexual Health Clinic - Telephone: 9224 2178 (or page the Immunology Registrar after hours)
- Fremantle Hospital Sexual Health Service - Telephone: 9431 2149 (or page the Infectious Diseases consultant after hours).

If these services are not convenient for the patient, the appropriate clinicians in the above hospitals may also authorise the use of NPEP starter packs (seven days of medication) which should be available from Emergency Departments in larger metropolitan hospitals and regional hospitals.

Patients who identify themselves as having had a high risk exposure to HIV may also call the NPEP telephone line (1300 767 161). A nurse assesses all callers and then will refer high-risk callers requiring NPEP to one of the above services. Callers assessed as low risk and not requiring NPEP, or who seek advice too late, may still need a sexual health check and/or blood tests and therefore are directed to go to their GP or a sexual health clinic. The Department of Health and the WA AIDS Council actively promotes this telephone line to at-risk groups.

For copies of NPEP resources for your at-risk patients contact Sue Laing, from CDCD:

Email: susan.laing@health.wa.gov.au

For more information about NPEP, including how to assess risk, find out about availability, refer patients and provide follow-up care, see the Department of Health's operational directive:

Protocol for non-occupational post-exposure prophylaxis (NPEP) to prevent HIV in Western Australia
www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=12318



Rabies and Australian Bat Lyssavirus - Q & As for Doctors

Background

Although Australia is considered by the World Health Organization (WHO) to be rabies-free, many Western Australians travel to rabies endemic countries each year where contact with a rabid animal may occur. Frequently, the Communicable Disease Control Directorate (CDCD) receives telephone calls from members of the public and general practitioners (GPs) seeking information on the recommended management of animal bites acquired by Australians while overseas. In addition, CDCD also fields enquiries from clinicians concerned about Australian bat lyssavirus (ABL) when assessing bat exposures that have occurred within Australia.

Here we address the most common questions and scenarios encountered in assessing and managing potential exposures to rabies or ABL.

Q. How similar are rabies and Australian bat lyssavirus?

Australian bat lyssavirus (ABL) and rabies virus are closely related members of the family Rhabdoviridae, genus Lyssavirus. Based on the two known human cases of ABL infection to date in Australia, it is assumed that ABL infection has the same clinical features as rabies. In addition, rabies post-exposure prophylaxis is indicated for patients with a possible exposure to ABL or rabies.

However, the major difference between ABL and rabies is that no mammalian reservoir besides bats, has ever been identified for ABL, whereas the rabies virus is maintained in a wide array of mammalian species, making it endemic throughout much of Africa, Asia, the Americas and Europe.

Q. One of my patients just returned from a vacation in Bali where they were bitten by a monkey that they were feeding. Do they need rabies prophylaxis?

Yes - Indonesian authorities declared on 1 December 2008 that Bali is no longer rabies free. This is contrary to advice in the 9th Edition of the Australian Immunisation Handbook. Rabies has now been confirmed in dogs from the southern tourist areas of Bali (Kuta and environs) which are frequented by Australian travellers. It also appears that there may have been fatal human cases of rabies in Bali in the latter months of 2008.

Therefore, rabies post-exposure prophylaxis (PEP) is recommended for all persons with risky animal bites sustained anywhere in Bali (as for other parts of Indonesia, South-East Asia and other parts of the world where rabies is endemic). Any mammal in Bali, including dogs, monkeys, cats and bats, should be considered potentially infected. Risky exposures include bites, scratches and mucous membrane exposure to animal saliva.

Delayed PEP is currently recommended for people who had animal exposures in Bali dating back to 1st August 2008. For advice and for arranging rabies PEP, during office hours, please call your local Public Health Unit (rural areas) or the Central Immunisation Clinic (metropolitan area) on ph. 9321 1312. After hours, the on-call public health physician can be contacted via the Department of Health duty officer on ph. 9328 0553.

Q. I had a patient come in with a dog bite they received in the Philippines two days before. Should she be offered rabies post-exposure prophylaxis?

Yes. There are three steps in protecting this patient from possible rabies. First, promptly and thoroughly wash all bite wounds and scratches with soap and water, and apply a virucidal preparation such as povidone-iodine solution after the washing. Consideration should also be given to the possibility of tetanus and other wound infections, and appropriate measures taken. Primary suture of a bite from a potentially rabid animal should be avoided.



Second, post-exposure management in a non-immune person should always include the infiltration of Human rabies immunoglobulin (HRIG) in and around wound(s), in addition to a course of rabies vaccine. The only exceptions for administration of HRIG are people with documented evidence of either completion of the pre-exposure prophylaxis regimen or adequate rabies antibody titres; these people should receive vaccine only. A single dose of HRIG is given to provide localised anti-rabies antibody protection while the patient responds to the rabies vaccine. It should be given at the same time as the first post-exposure dose of vaccine (day 0). If not given with the first vaccine dose, it may be given up to day 7, but should not be given any later in the vaccination course. The dose of HRIG for all age groups is 20 IU per kg body mass. The HRIG should be infiltrated in and around all wounds using as much of the calculated dose as possible, and the remainder administered intramuscularly at a site away from the injection site of rabies vaccine.

Third, in addition to HRIG, the post-exposure treatment for either rabies or ABL exposures consists of a total of 5 doses of rabies vaccine. The first dose of vaccine is given as soon as is practicable (day 0), and subsequent doses are given on days 3, 7, 14 and 28 - 30. The volume of rabies vaccine administered to infants and children is the same as that given to adults (1 mL). In adults and children, the vaccine should be administered into the deltoid area, as administration in other sites may result in reduced neutralising antibody titres. In infants <12 months of age, administration into the anterolateral aspect of the thigh is recommended. Exposed persons who have previously received a documented course of 3 doses of pre-exposure prophylaxis (or a previous course of post-exposure vaccination), should receive 2 doses of vaccine on days 0 and 3, and do not require HRIG.

Delivery of HRIG and rabies vaccine to GP surgeries or hospital emergency departments can be arranged by calling your local Public Health Unit or the Central Immunisation Clinic during routine work hours or the

Department of Health emergency number after hours and on weekends (9328 0553).

There is one caveat to the advice to administer rabies post-exposure prophylaxis to a patient receiving a dog or other animal bite/scratch in a rabies endemic country. If this traveller had presented >10 days after being bitten and it can be reliably ascertained that the animal has remained healthy (>10 days after the exposure), post-exposure treatment would not be required; otherwise, a complete course of treatment should be administered, even if there has been a considerable delay in reporting the incident.

Q. One of my patients is going on a trip to Swaziland where they will work as a volunteer in an animal protection program for several months. OR: My patient works in an animal refuge in the Darling Ranges that cares for sick and injured wildlife, including bats.

Should they consider receiving rabies pre-exposure prophylaxis?

Yes. Rabies vaccine is effective when used for pre-exposure prophylaxis for rabies and ABL. Pre-exposure prophylaxis simplifies the management of a subsequent exposure because fewer doses of vaccine are needed and because Human Rabies Immune Globulin (HRIG) is not required. HRIG is often difficult, or even impossible, to obtain in many countries.

Pre-exposure prophylaxis with rabies vaccine is recommended for:

- travellers and expatriates who will be spending prolonged periods in rabies-endemic areas
- people working with mammals in rabies-endemic areas
- people in Australia liable to receive bites or scratches from bats (this includes bat handlers, veterinarians, wildlife officers and others who come into direct contact with bats)
- research laboratory personnel working with live lyssaviruses.



Pre-exposure prophylaxis for both ABL infection and rabies, for all ages, consists of a total of 3 injections of rabies vaccine, with the second dose given 7 days after the first, and the third dose given 28 days after the first.

The World Health Organization maintains a comprehensive website of the presence of rabies virus in countries around the world. If your patient is travelling to a country for which you do not know the rabies status you can query the rabies database at www.who.int/globalatlas/

Q. I have a patient who picked up an injured bat in the Kimberley and it bit her on the finger. Should she receive rabies prophylaxis for a possible exposure to ABL?

Yes. Two cases of a fatal rabies-like illness caused by ABL have been reported in Australia, one in 1996 and the other in 1998. Both patients had been bitten by bats. Evidence of ABL infection has since been identified in all 4 species of Australian fruit bats (flying foxes) and in several species of Australian insectivorous bats. It should therefore be assumed that all Australian bats, anywhere in the country, including the Perth metropolitan area, have the potential to be infected with ABL.

Post-exposure treatment should be considered whenever a bite, scratch or mucous membrane exposure to saliva from any Australian bat has occurred, regardless of the extent of the bite or scratch, the time lapsed since the exposure, the species of bat involved, and even if the bat was apparently normal in appearance and behaviour.

Exposure to bat blood, urine or faeces, or to a bat that has been dead for more than four hours, does not warrant post-exposure treatment.

Although data on the effectiveness of rabies vaccine and HRIG as post-exposure treatment against ABL infection are limited, the available animal data and clinical experience support its use. The essential components of post-exposure treatment for ABL are the same as those for rabies exposures, i.e. prompt local

wound management and administration of HRIG, and rabies vaccine as soon as is practicable.

Where post-exposure treatment for a potential exposure to ABL is indicated, the bat, dead or alive, should be sent for testing to the WA State Animal Health Laboratory, provided this can be accomplished without placing others at risk of exposure. Arrangements for shipping the bat can be facilitated by your local Public Health Unit or CDCD (9388 4816).

Q. I have a patient who picked up an injured dog in Albany and it bit him. Should he receive rabies prophylaxis for a possible exposure to ABL?

No. Aside from bats, there is no known reservoir of ABL in Australia; therefore prophylaxis for ABL following a bite from non-bat species within Australia is not currently recommended.

Current and detailed CDCD Australian Bat Lyssavirus Guidelines, including the appropriate reporting forms are available at: www.health.wa.gov.au/circulars/pdfs/11810.pdf
More information on rabies in general is available at: www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-communic-factsheets-rabies.htm

References

1. National Health and Medical Research Council. The Australian Immunisation Handbook. 9th Edition, 2008. Canberra: Australian Government, 2008.
2. Manning SE, Rupprecht CE, Fishbein D, et al. Human rabies prevention - United States, 2008. Recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2008; 57: 1-26, 28. (Available at: www.cdc.gov/mmwr/preview/mmwrhtml/rr57e507a1.htm).
3. Torvaldsen S, Watson T. Rabies prophylaxis Western Australia: the impact of Australian bat lyssavirus. *Comm Dis Intell* 1998; 22: 149 - 153.



Childhood Influenza Vaccine Trial 2008: Update

The severity of influenza as a significant childhood illness is under-recognised by many Australian medical practitioners. In the winter of 2007, three influenza toddler deaths led to widespread community concern in Perth. This event contributed to the Department of Health decision to offer all West Australian children aged 6 - 59 months free trivalent inactivated influenza vaccinations (TIV) prior to winter in 2008.

The Communicable Disease Control Directorate (CDCD) and the West Australian Department of Health would like to thank and acknowledge the support given to the successful introduction of influenza vaccine in the target age-group in WA in 2008. Despite challenges due to late vaccine availability and some resistance from a small number of primary care physicians the programme can be judged a success. Preliminary data indicate that in just over 6 months more than 60,000 doses of paediatric influenza vaccine were administered to children aged 6 months to 59 months of age in WA. Over 37,000 children received at least one dose of influenza vaccine and 62% (over 23,000) of these received the second dose of vaccine. Those children who received both doses of vaccine in 2008 will only require a single dose of influenza vaccine in each subsequent year to be considered fully vaccinated against influenza.

Data from the Children's WA Influenza Vaccine Effectiveness (WAIVE) study are also very encouraging. The study, which is a collaboration between the Vaccine Trials Group (VTG) and CDCD, recruited children with influenza-like illness in 3 settings: (1) inpatients in metropolitan hospitals, (2) Princess Margaret Hospital emergency department and (3) Sentinel Practitioner Network of WA - SPN(WA) - general practices. The outcome measure was laboratory confirmed disease and an estimate of the severity of disease was also collected. Interim analyses show the vaccine's effectiveness against laboratory confirmed influenza in children approached 70%, with a trend to higher protection in younger children. Children aged 6 - 59 months had good protection against laboratory confirmed influenza following two doses of TIV. The study continues

to explore the cost effectiveness of vaccine programs in this age group.

With this year's successful roll out of the childhood influenza vaccination campaign, we are pleased to announce its continuation in 2009. It is anticipated that we will have paediatric influenza vaccine in WA in late February or early March and we will work with the College and GP Divisions to ensure practitioners are informed of developments in a timely manner. The assistance of immunisation providers in the 2008 paediatric influenza initiative made the program a major success and CDCD looks forward to again working with providers next year to protect the health of children in Western Australia. If you have any questions regarding the childhood influenza vaccine programme please call the CDCD Immunisation Coordinator: Dr. Paul Efler on telephone: 9388 4816.

Sexual Health Quarterly Forum 10 December 2008

Sexual Health Quarterly Forums are organised by the Sexual Health and Blood Borne Virus Program (SHBBVP), and are held four times a year. These Forums deliver a series of presentations and updates for health professionals across the State on topical sexual health and BBV-related issues. The Forums provide a space for questions and discussion as well as an opportunity to personally network and interact during the morning tea break. Remote and rural health services participate through videoconferencing.

The next Forum will focus on the results of the evaluation of various SHBBVP projects. Including, the WA STI Guidelines, WA HIV/AIDS, STI and Hepatitis C Action Plans and the Aboriginal Sexual Health Strategies.

Details: Wednesday 10 December, 9am - 1pm
Health Department Theatre,
189 Royal Street, East Perth

Morning tea provided

RSVP your attendance to:
andriana.kursar@health.wa.gov.au
by Wednesday 3 December



HPV Vaccination Update

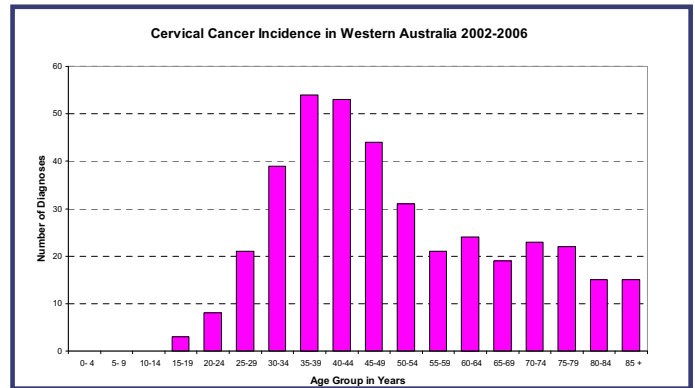
Every year, Western Australia has approximately 80 women diagnosed with cervical cancer and 25 women die from the disease. The peak incidence occurs among women aged in their 40s (see Figure 1), but cervical cancer diagnoses - even deaths - have occurred in WA in recent years among women less than 20 years of age. Even more significant, 1537 pre-cancerous High-grade Squamous Intraepithelial Lesions were detected on cervical cytology specimens in WA in 2006; many of these lesions would be attributable to HPV infection.

The Human Papilloma virus (HPV) vaccine can prevent most cervical cancers when administered to females not previously infected with HPV. HPV vaccination is currently recommended for all females aged 10 - 26 years of age in Australia. With Commonwealth Government support, WA Health is providing the Gardasil vaccine at no cost to women 26 years of age or younger until 30 June 2009. The recommended dosing schedule for Gardasil is 0, 2, 6 months, so there is still time to complete the HPV vaccination series using the vaccine being

provided at no cost to the patient. Keep in mind that where flexibility in the dosing schedule is unavoidable, the second dose of vaccine can be given after 1 month, with the third dose given 3 or more months after the second dose.

Since the program's inception, GPs in WA have ordered more than 300,000 doses of Gardasil vaccine and we thank immunisation providers for ensuring that female patients are protected from cervical cancer. We encourage GPs to actively contact female patients and recommend they come in to start (or complete) the HPV vaccination series while the free vaccine is still available.

Figure 1



Recording of Aboriginality on PathWest Laboratory Request Forms

PathWest have recently included a place in the patient details section at the top of their standard "Pathology Request" form where requesting doctors should record the patient's Aboriginality. The question "Is patient of Aboriginal descent", along with tick boxes for "yes" or "no", are placed just below the space for recording date of birth and sex. Please note that "Aboriginal descent" in this case should be taken to include people who self-identify as being of Torres Strait Islander background.

We urge doctors to ascertain the Indigenous status of their patients and record this information on the request form when ordering laboratory tests. The information is of particular interest in relation to the surveillance and public health follow-up of notifiable diseases, given the increased incidence of most infectious diseases among Aboriginal people. Notification rates of most gastrointestinal infections, sexually transmissible infections, blood-borne viral infections and vaccine preventable diseases are higher in Aboriginal people, but ascertaining the true disparity is difficult because of incomplete recording of Aboriginality in notification data. PathWest will pass the information on to CDCD and Public Health Units when notifying cases, as required in the *Health Act 1911*. Doctors should also record the information on the standard Notification Form for notifiable diseases.

The addition of the Aboriginality indicator on PathWest's form is part of a national effort to improve recording of Indigenous status in health information, including notifiable diseases. It is hoped that other WA pathology laboratories will add a field for recording indigenous status to their request forms over coming months.

PathWest will progressively issue the new forms as old stocks are used up, but if you require new forms please order them from PathWest's marketing department on either (08) 9346 2142 or marketing@pathwest.com.au



Audit of Antenatal Screening for STIs and BBVs

Background

Antenatal screening of STIs and BBVs followed by appropriate treatment of detected infections can prevent adverse outcomes in both mother and baby. For this reason, since 1992, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) has recommended that pregnant women be tested for syphilis, hepatitis B and C and human immunodeficiency virus (HIV) at their first antenatal visit¹. These recommendations have been standard practice in most Australian antenatal settings.

In August 2007, the WA Department of Health (DoH) issued an Operational Directive (OD)² recommending that all antenates also be tested for chlamydia at the first antenatal visit. It also recommends that women living in STI-endemic regions (i.e. the Goldfields, Kimberley and Pilbara) be tested for gonorrhoea at the first antenatal visit, in addition to repeat/second tests for chlamydia, gonorrhoea, syphilis and HIV during the third trimester.

In response to the introduction of the DoH OD, CDCD conducted an audit of WA public hospitals to determine the proportion of women who underwent antenatal STI and BBV testing according to the RANZCOG recommendations. CDCD aims to undertake a second audit of the same hospitals to evaluate adherence to the Department of Health OD after hospitals have had sufficient time to establish them.

Results

The antenatal records of 1411 women delivering immediately prior to 1 July 2007 at seven hospitals (three non-metropolitan and four metropolitan) were reviewed. Women were excluded if their general practitioners were not in the same public health region as the hospital where they delivered. Information collected included patient demographics, number of BBV and STI tests, and results thereof.

The 1411 women comprised 1,207 (86%) non-Aboriginal women, 200 (14%) Aboriginal women and four women with unknown Aboriginal status. A high proportion of women were tested for hepatitis C (88%), hepatitis B (87%), syphilis (86%) and HIV (76%). A small proportion of women were tested either for chlamydia (18%) or gonorrhoea (22%) (see Figure 1). Chlamydia and gonorrhoea

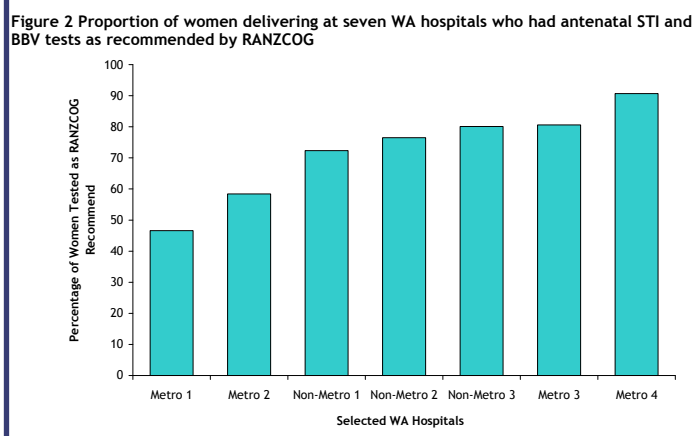
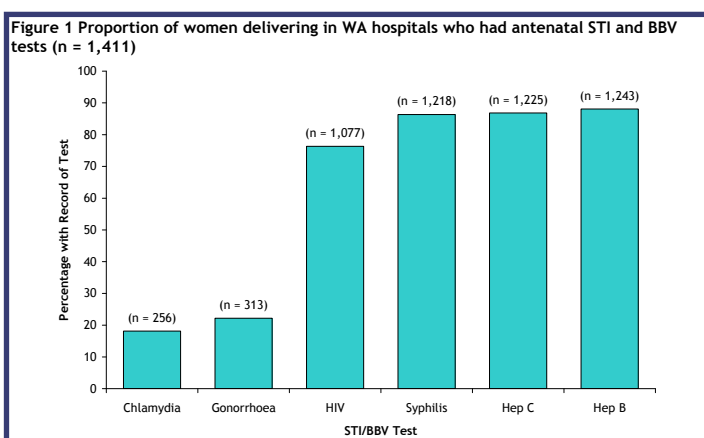
testing was more common among Aboriginal women (48% and 55%, respectively) compared to non-Aboriginal women (13% and 17%, respectively).

Conclusion

There was good adherence to the RANZCOG guidelines, although there was considerable disparity between hospitals (see Figure 2). Overall, 72% of women had all recommended antenatal tests (see Figure 2) and there was no significant difference in this proportion by Aboriginal status (75% Aboriginal and 72% non-Aboriginal women). As data were collected for the period immediately prior to the implementation of the DoH OD, only 15% of women were tested as recommended by the DOH OD for non-STI endemic regions. CDC will collaborate with hospitals to assist in the adoption of the DoH OD recommendations and conduct a second audit to assess its uptake.

References

- 1 The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. College Statement: Antenatal Screening tests, November 2006. www.ranzcog.edu.au/publications/statements/C-obs3.pdf. Access date: 16/10/2008.
- 2 Department of Health WA. Operational Directive: Antenatal testing for sexually transmissible infections and blood-borne viruses. 2007. www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=12299. Access date: 16/10/2008.





2008 Influenza Season at a Glance

Although the 2008 influenza season appeared relatively late and was short in duration the number of influenza notifications received was actually very similar to 2007, which was considered a moderately heavy year (see Figure 1).

There was a total of 1031 influenza notifications in 2007 compared to a total of 954 influenza notifications to October 2008. The rate of influenza notification per 100,000 population in 2007 was 50, and in 2008 YTD (03/11/2008) the rate was 45 per 100,000 population. In 2008 the peak of influenza activity was in September, whereas 2007 experienced a peak during July.

The highest notification rates were seen in the 0 to 4 year age group (Figure 2). In 2007 this age group experienced 174 cases per 100,000 population, well above the notification rate for any other age group in that year (Figure 2). In 2008 the 0 to 4 year age group includes a number of children actively recruited into the WAIVE study (see page 5), likely to elevate rates in this age group. After removing the WAIVE study cases who tested positive for influenza virus from the notification data, the rate of influenza per 100,000 population aged 0 - 4 years would drop from 127, as seen in Figure 2, to 91. This suggests vaccination in this age-group had a significant impact in reducing the impact of influenza in 2008 relative to other age groups.

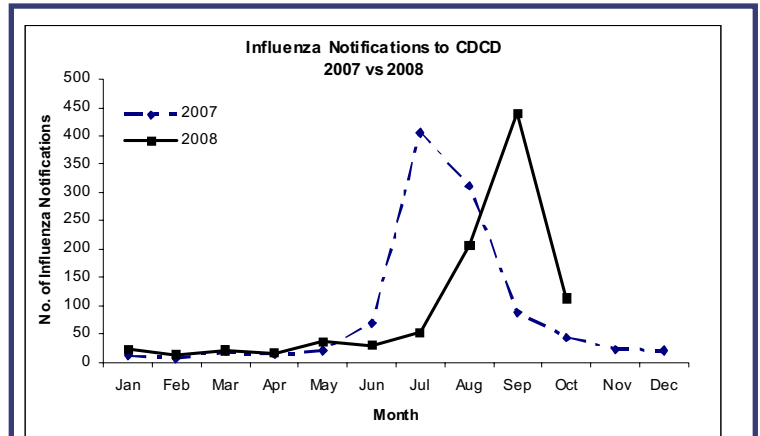


Figure 1 - Monthly influenza notifications to CDCD, 2007 vs 2008.

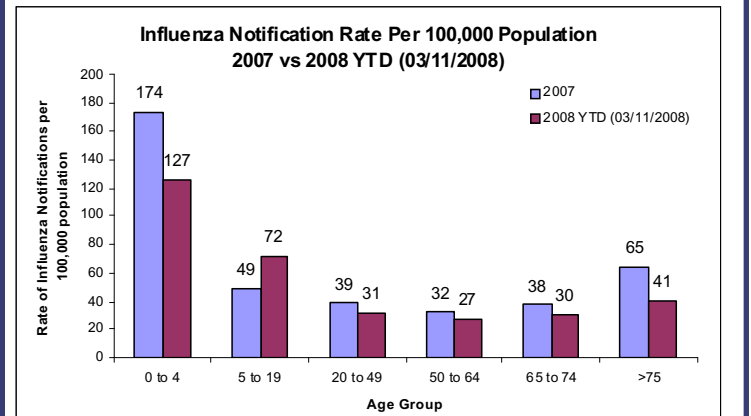


Figure 2 - Notification rates of laboratory-confirmed influenza, CDCD, WA, 2007 vs 2008 YTD, by age group.

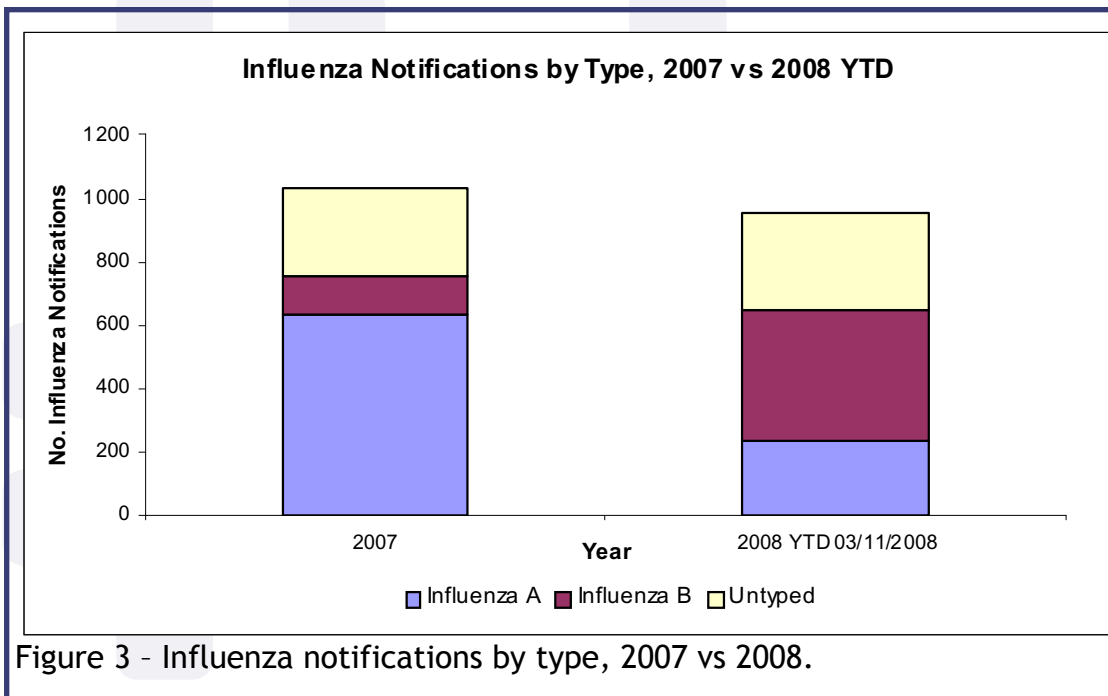


Figure 3 - Influenza notifications by type, 2007 vs 2008.

The influenza season in 2008 was comprised predominantly of influenza B virus (62% of typed specimens), whereas influenza A (83% of typed specimens) virus predominated in 2007 (see Figure 3).