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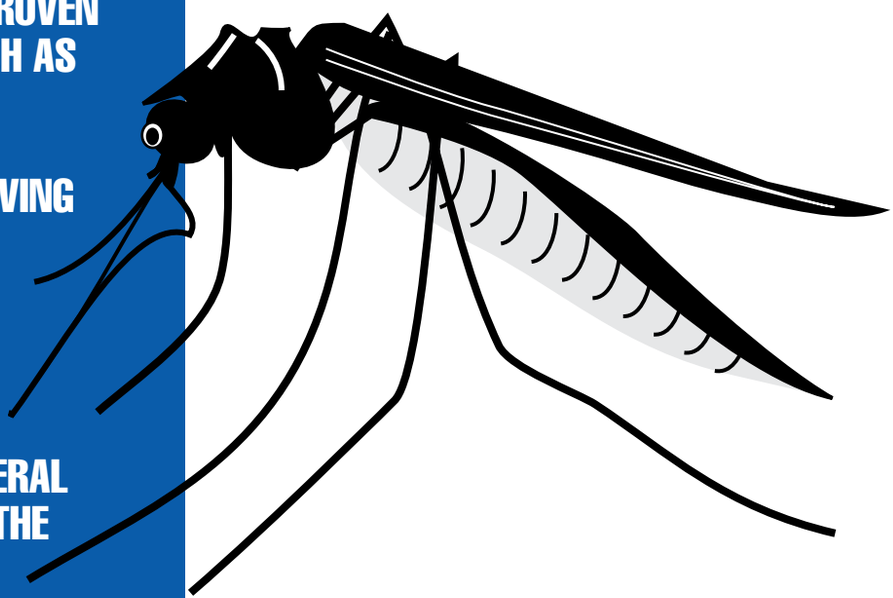

Theme: "EMERGING INFECTIONS"

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GUEST EDITORIAL

"New" diseases threaten proven disease interventions such as Vaccination

Dr Robyn McIntyre, UNICEF, Suva

In a funding environment where much attention is focused on "new" diseases such as Pandemic Influenza and HIV it is easy to forget that much of the Pacific still lacks sufficient protection from life threatening vaccine preventable diseases such as measles and rubella. In Fiji, as in many countries, whilst most immunizations are undertaken by the MOH, General Practitioners have a central role in ensuring their patients achieve full immunization status, with potent vaccines.

Coverage rates for vaccines throughout the Pacific are generally improving but in 2006, according to Joint Reporting Forms supplied by countries to UNICEF and WHO, only12 of 20 countries had greater than 90% coverage for the first measles dose and only 8/20 had greater than 90% coverage for the third DTP dose. Global goals recommended by the Global Immunization Vision & Strategy 20101 are that country coverage for fully immunized children should be 90% overall and that there should be greater than 80% coverage in all districts by 2010, this latter reflecting that enormous provincial disparities can be hidden in country statistics. Two further goals are those for measles elimination by 2012, which requires coverage with 2 doses of measles containing vaccine of greater then 95%, and also, to achieve Hepatitis B control by 2012, by achieving greater than 80% coverage of the first HepB1 dose within 24 hours and HepB3 coverage of greater than 95% in all districts.

The dangers of not achieving these goals have been illustrated by outbreaks of vaccine preventable diseases in recent years such as the 2003 measles outbreak in the Republic of Marshall Islands in which 826 cases were diagnosed and 3 fatalities resulted 2 and the 2006 Fiji outbreak in which 132 cases were diagnosed and fortunately no deaths resulted3. Similarly Rubella outbreaks have occurred such as that diagnosed in Samoa in 2003, which resulted in an estimated 5000 clinical cases, 100 hospitalisations and 2 deaths as a result of the unusually high rates of the usually rare complication of encephalitis4. In all these cases the response was timely and appropriate, that is Supplementary Immunisation Activities of the appropriate vaccine.

The PIPS (Pacific Immunization Programme Strengthening) partnership formed in 2004 serves as a regional coordinating body for immunization and is an excellent example of the benefits of partnerships between countries, technical agencies and donors. PIPS includes representatives from Pacific Islands' and territories' Ministries of Health, The United Nations Children's Fund (UNICEF),World Health Organization (WHO), JPIPS (Japanese- Pacific Immunization Programme Strengthening), SPC (the Secretariat of the Pacific Community), CDC (the U.S. Centers for Disease Control and Prevention), AusAID(the Australian Agency for International Development), JICA (Japan International Cooperation Agency), and NZAID (New Zealand International Aid and Development Agency). Many challenges exist in delivering potent vaccines in the Pacific with geographical isolation and the expense of transportation in resource poor environments and maintaining a well trained cadre of health staff foremost. Current PIPS priorities include supporting countries to improve coverage rates via strengthened immunisation planning and review processes, improved pre-service curricula teaching and retraining of health staff, support for introduction of new vaccines and encouragement of evidence based communication strategies to increase public understanding of and demand for immunisation.

All but 4 PICs have now introduced Haemophilus Influenza (Hib) vaccine into routine schedules and it is anticipated that a drop in under-5 mortality rates in the Pacific will result. As exciting new vaccines such as those for rotavirus and pneumococcal vaccine become affordable and available more children's lives will be saved, reaffirming that vaccination remains one of the most highly effective disease prevention strategies and one which must remain high on the agenda's of health providers at all levels.

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MEDICO-POLITICAL COLUMN

EMERGING INFECTIONS

Dr Neil Sharma,
Editor in Chief,
FGP

Introduction

This issue of the journal deals with the importance of emerging and re-emergent diseases and its primary health care significance. Many facets of human activity change the ecology of the microbiological world. Deforestation, change in air quality, climate, and other "macro" changes are of concern because they are a result of human activities. In 1992, a group of eminent scientists led by Joshua Lederberg got together and noted that the epidemiology of infectious disease is also changing at the "micro" level. Astute microbial adaptation and change have shaped human demographics and behavior historically. Newer changes resulting from an over-populated globe such as crowding and urbanization, breakdown of public health (a general phenomenon throughout the late 1970s and early 1980s), technology and industry, international travel and commerce, and economic development and land use all are impacting on the processes of emergence and re-emergence.

Newer factors include human susceptibility to infection (which has changed with the HIV pandemic and the aging of the human population), climate and weather, changing ecosystems, poverty and social inequality, war and famine, lack of political will (which ties in with the breakdown of public health), and the intent to harm (bioterrorism) have compounded the issues. The interaction between microbes and humans, resulting in infection, is aired for thought and consideration.

Globalization is just a general term. The globalization of an epidemic has recently been well demonstrated with the SARS and Bird flu epidemics of recent. The diseases were globalized through travel and possibly through trade. As of June 2007, over 60 countries in the world had experienced SARS, a prime example of an emerging infection. When globalization of factors occurs, it can create a change in the microbial ecosystem, which results in unexpected outbreaks or changes in the epidemiology of infectious diseases.

Globalization has many dimensions especially with geometric increases in population in developing countries, and increasing urbanization in these poor countries. These situations create the mega-cities such as Sao Paolo, Brazil and Cairo, Egypt, where there are large urban populations with poor sanitary infrastructure. It is no different in the peri-urban Suva-Nausori corridor. Although not a mega city by any standard but the socioeconomic and health implications are in that range.

Squatters have electricity, but the setting is very poor, without sanitation or access to clean water. The difference amongst the elite and poorest wider, the poverty levels escalating the difference in quality and life expectancy is even greater than the actual monetary gap. In wealthy countries there are numerous "safety nets", such as public insurance and housing programs, which act to cushion the blows of economic downturn and natural disasters. In poor countries these safety nets do not exist, because there is not the additional financing to invest in them and due to many political and social factors. There is thus uneven global access to wealth, water/sanitation, public health services, and even to information and new technologies.

Emerging infections and trade related infections

International travel is really important in the global transmission of disease. We are transparent on the issues of sexual transmission of diseases by the tourist to our exotic people. However international agriculture trade in the last 30 years, there has been profound changes in the volumes of goods and services crossing borders. Globalization has altered and enhanced certain transmission modes, and it has also led to the actual emergence of novel human diseases.

Trade-related infections, which captures the whole concept of emergence when you "scale up" agricultural production or the production of human biologicals to meet international trade market demands results in unscrupulous practices which enheighten risk taking and results in the transfer of potentially infectious agents globally. Examples of trade related infections include the new variant Creutzfeldt Jacob disease (bovine spongiform encephalopathy, or BSE), enteric bacteria (E. Coli O157: H7, salmonella, etc), and HIV/AIDS.

Food borne diseases are also trade related infections. When you scale up the slaughtering of beef, speed up the production line, or make the feedlots larger, you enable the transmission of food borne agents such as E. Coli O157:H7. This agent was not seen as an epidemic infection until large scale human infection occurred in a large, multi-state outbreak in 1997 In USA.

According to the "Kreever report", the majority of Japanese hemophiliacs are also thought to have been infected during 1983-1985 by non-heat-treated factor VIII concentrates imported from the US. It is only very recently that American hemophiliacs received any compensation in the United States.

Perhaps even of greater risk is the burgeoning trade in innovative products for therapeutics derived from human material. An example

is the role of factor VIII production and trade of blood products in broadening the transmission of HIV/AIDS. There appears to be a risk in scaling up of production and the pooling of biological products. Scaling up may be more efficient economically but biologically it has some unknown risks, which are not factored into that decision making process.

HIV/AIDS: HIV/AIDS is an instructive example in the concept of emergence. The disease was officially documented in the early 1980's, when they had a cluster of infections that was reported in the US. But it actually started quite earlier. People working in central Africa at the time started to see changes in the pattern of infection, where people were dying of tuberculosis at a much younger age than usual. In Uganda, people were coming up with yeast pharyngitis and strange infections that had not been seen before. So actually the overall landscape of infectious diseases was changing in central Africa long before the CDC publication of AIDS in the US in the early 1980's.

HIV/AIDS has affected every continent in the world, in a short span of about 20 years. This is really impressive because it is not a very infectious disease. You have to have sexual contact with someone or share his or her blood to get the infection. There are about 15,000 new infections a day, 95% of the cases in developing countries. 1,700 are in children under age 15 years, and about 13,000 are in persons aged 15 and 49 years of age (among this age group, about 50% are women, and 50% are 15-24 years of age), people in their most productive years of life.

It is interesting to think about the factors of HIV emergence because it tells you how these factors interplay with each other. First of all, there was an increase in urbanization in central Africa, because there was ongoing warfare and displacement of populations and troops in the area around Lake Victoria. With the movement of the troops, people fled the countryside and entered urbanized settings. In that process, people changed their lifestyle, and lost some of their traditional cultural mores, which are actually very conservative. People started having more sexual partners due to the commercial sex trade, because women and girls tried to support themselves. There was also rape, which often accompanies armed conflict. Thus, the increase in the sex trade in urban areas (in addition to the increase in drug trade) facilitated the direct transmission of HIV/AIDS.

Another aspect of the HIV/AIDS epidemic is the greatly increased mortality from the disease in poor countries. Because the innovations in treatments are not shared equally globally, developing countries have a much greater rate of mortality from HIV. Interesting questions to ask are: how did globalization of the market contribute to HIV transmission? Did "scaling up" of production have a role in enhancing transmission?

This is a continued area of research and export by pharmaceutical companies in the U.S. and other developed countries. Will there be another HIV? Will we find prions in the blood supply?

There was breakdown of public health with war and destabilization, and it was difficult to get prevention in the form of information, condoms, and counseling and testing in poor economies. Technology and industry, along with international commerce, were central to the emergence as well.

Climate change

Climate change is a new factor in the emergence issues. Its novelty is puzzling in that a number of climate research groups, including those at University of Washington, have been actively describing the phenomenon of global warming. But what this climate change might mean for infectious disease is a complex question, with different answers for different locations. Global warming and climate change are a real phenomenon

Carbon dioxide is one of the green house gases as it traps the sun's rays and hastens global warming through the green house effect. Since the Industrial Revolution, there has been a remarkable increase in greenhouse gases, correlated to an increase in the human population, and scientists have documented this back to 8,000 BC through "paleoclimate" studies. .Each year, 20 tons of carbon in the form of carbon dioxide, the mass of four adult elephants, are added to the atmosphere for each person in the U.S. We are the major consumers of energy and the major producers of carbon dioxide in the world. The U.S. has the largest emission levels, with five metric tons of carbon per person, while India has the lowest, with less than 1 metric ton of carbon per person.

Even in the 19th century, people were measuring temperature pretty accurately in a number of observatories. Tree rings are also used; you can count tree ring growth and the distance between the rings and estimate what the ambient temperature must have been for that tree to grow that distance in its diameter.

Global warming and infectious diseases

First, warmer climates tend to be good for bacterial infections we are aware of how staph and strep. thrive in those settings. Warmer weather will probably be better for vectors and the introduction of new illnesses as well.

We have seen a comeback by vector-borne diseases internationally. Although not all mosquitoes are vectors of infectious agents, the range of mosquitoes has been increasing

in the last decade. This is Aedes aegypti, the major vector for yellow fever and dengue. In the 1970s, there was a mosquito eradication program, which was based largely on DDT. It really had an impact between the 1930 and the 1970s, the program was disbanded in the late 1970s and it didn't take long for that vector to re-inhabit its entire previous zone.

One of the major risks we're struggling with is urbanized yellow fever which is really a danger because the vaccine is not generalized.

Dengue has emerged in all tropical and subtropical zones in the last 20 years, a remarkable growth. Now you have all four serotypes circulating in all tropical zones. This has been primarily through human travel, where infected humans have been moving from zone to zone and those serotypes have become "hyper endemic" for dengue.

These are worldwide vector-borne parasitic diseases, vector-borne bacterial diseases and arboviral diseases.

So as you get warmer, wetter weather, with the intrusion of new vectors, you will see a broad variety of disease, not simply a select few.

At last count West Nile Virus is tightening its grip in The US of A in July 2007. A novel infection in this hemisphere, but it is an old infection from the other hemisphere. It was always endemic in the Ukraine, Israel, and in the Black Sea region. West Nile Virus is believed to have arrived in this hemisphere when a bird was brought into NYC by an air traveler that caused the first NYC outbreak. When they first started counting West Nile Virus in NYC, they were afraid it was a bioterrorist event and they genotyped the sample and found that it was Israeli in origin.

As in their endemic region, birds were dying and mosquitoes were transmitting the disease, but the host range for vertebrates in this hemisphere was unknown. Whenever an agent is introduced in a new environment, you do not know for sure what hosts will be affected, and this has strong implications for emerging, introduced infections. You know what it used to infect in the endemic region, but it is possible that it will infect a whole new range of hosts. In fact, we have seen the illness in humans, horses, cats, dogs even in alligators. It appears to have a broad range of vertebrate hosts here.

Summary and health needs in the new millennium

We have the factors of emergence being globalized, but the resource base remaining uneven, where access to housing, economic livelihood, clean water and sanitation has not changed much globally in the last decade. There is also no globalization of effective public health prevention or response to epidemics. We do have increased global awareness of epidemics, because you have globalization of telecommunications and information. At the very least, we know what is occurring more accurately than we ever have before. Such information reaches the rest of the world rapidly now. We know about these things in a timely way and so we have more time for public health preparedness and international response. The problem is that, it is really not possible to respond unless you have on-site response infrastructure and strategy. Unless you can investigate your outbreaks locally, you are not going to mitigate these problems.

Priorities for the health in the new millennium may include.

You need participation in local government if you want to see changes at a local level.

Access to clean water and sanitation is very central.

Generalize economic benefits.

Strong local, national public health systems.

Incentives for serious investment in public health by the private sector. It is still not easy to push the private sector to invest in public health infrastructure.

Public health needs to be on the agenda for local, regional, and global forums.

Global preparedness for epidemics.

Web Site Reference.

Centers for Disease Control (CDC)
Weekly MMWR, monthly EID Journal, and other infectious disease information and articles

APEC Emerging Infections Network (APEC EINet)
Newsbriefs of emerging infectious diseases in the Asia Pacific region

World Health Organization (WHO)
Weekly Epidemiological Record and other infectious disease/outbreak news and resources

Pan American Health Organization (PAHO)
EID update articles for the region of the Americas, and other resources

World Organization for Animal Health (OIE)
Animal disease alerts and information

Food and Agriculture Organization of the United Nations (FAO)
Contains infectious diseases of agricultural importance

Center for Infectious Disease Research & Policy (CIDRAP)
Latest news and articles on infectious diseases, based at the University of Minnesota

International Society for Infectious Diseases (ISID)
ProMED-Mail serves as a central site for news, updates, and discussions of outbreaks of emerging diseases that affect human health

REVIEW 3.1

FIJI NETWORK FOR PEOPLE LIVING WITH HIV AND AIDS (FJN+)

Dr Jiko Luveni,
Suva.

FJN+ is a newly formed organization that aims to provide care and support to People Living with HIV (PLWHs), their families and friends, to promote quality of health, facilitate social support and increase HIV awareness to the population at large to reduce stigma and discrimination. The organization was registered under the Charitable Trust Act of Fiji dated 23 September 2004. FJN+ has a Constitution and a Board of Trustees.

In the 18 months of operation, FJN+ has made a name for itself and known in most parts of Fiji as the organization that have the strong commitment and a passion for their role in HIV prevention.

The office is manned by a Secretariat that includes an Executive Director, Project Manager, Finance Manager and an Administrative Manager.

Membership: Currently there are 22 members who are living with HIV – 11 males and 11 females. FJN+ attract PLWHs who are disadvantaged and in need of social support. However, there are more than 100 young people that have registered as volunteers and will be available for whatever activity FJN+ will need them to participate in.

A number of FJN+ members have undertaken selected training courses in Life Skills, Stepping Stone and HIV 101 to prepare them for a more active role in peer education and support as well as for outreach activities.

Aims & Objectives: To provide opportunities for the voices of PLWHA, especially women and children disenfranchised throughout the Country to be heard in unison. To promote a positive image and give visibility to PLWHA issues in order to counter/remove fear, ignorance and prejudice that they face by providing information. To exchange personal experiences, information, skills and resources essential to establish, maintain and improve quality of life and provide opportunities for skill building particularly for income generation purposes.

ACTIVITIES

TFL/FJN+ Info line: An info line No. 180008 has been launched and accessible nationwide. The info line provides access to:

1. Most frequently asked questions about HIV and AIDS
2. Stories of people living with HIV
3. Information about FJN+
4. Updated statistics on HIV
5. Fax copies of the information stored in options 1, 3 & 4 above.

Maintenance of condom outlet by FJN+ Secretariat: The condom outlet at the office of FJN+ is placed in a very private corner that encourages confidential access to Barrow boys, Street kids and the general public. The outlet distributes approximately two gross of condoms weekly.

Stepping Stones – HIV/AIDS Communication and Relationship Skills:

The Stepping Stone approach develop skills that encourage individuals to develop their own solutions to their particular problems and concerns similar to finding stones to step on when crossing a dangerous river. The approach enables the individuals, their peers and communities to change their behavior individually or together to avoid the threat of HIV. In this regard, there is need to develop and strengthen skills in communication and coping with relationships The Delainavesi and Nadonumai areas have been selected to pilot the Stepping Stone program and two members of FJN+ - one male and one female are the coordinators.

The Pacific Regional HIV/AIDS project funded by the Government of Australia conducts training in this approach

Training of Youth Leaders on Life Skills (LS)

(A FJN+ and Methodist Church of Fiji partnership):

Through support of UNICEF, FJN+, in partnership with the Methodist Church of Fiji and Rotuma, has trained more than 200 Mentors for young people under this project. These Mentors are youth leaders from the various church denominations around Suva and Nasinu that have developed skills to form buddy relationship with other young people or their peers. This relationship enables them to apply life skills to nurture this relationship so that young people have someone to discuss social issues of concern such as HIV and AIDS, relationships, etc. Since these Mentors are youth leaders, they have reached out to more than 4,000 young people either individually or as members of youth groups or family members and have open discussions with them on social issues of concern.

Income generation:

FJN+ attracts PLWH that need social support and an aim of FJN+ is the promotion of quality of life of their members. In this respect, they need income to be able to afford nutritious meals, education costs for their children and to live a stress-free life. Capacity building to generate income generation skills is an important program of FJN+. The women have learnt sewing skills to sew marketable items and the men have a grass cutting project. Sewing machines and a grass cutter is available for their use.

Monthly Social meetings of FJN+ members:

Members meet monthly to socialize and to visually monitor improvement in their quality of life.

This is a very important activity when selected health topics are covered; spiritual teachings and individual needs assessments are also conducted. Members are updated on the progress of their application for social welfare assistance particularly housing and the meetings are opportunities to discuss the importance of compliance to treatment as well as new activities FJN+ would like to undertake based on their identified needs.

Capacity building:

Members are selected based on their interest and qualification to attend training courses. A member has obtained a Certificate in Counseling in which she gained the highest marks in her class and another has a Certificate in Basic Accounting. Twelve members including volunteers have attended training in Life Skills. Five of them are designated as Master Trainers and others are referred to as Facilitators who could get promoted to Master Trainers when they have gained more training experience.

The new PLWH members have undertaken training to become AIDS Ambassadors and a new member has come public with his status. He joins the four others that have been conducting outreach HIV education sessions to humanize HIV for a more effective outcome.

Outreach activities:

FJN+ is strongly committed to community interest in HIV and AIDS and responding to requests from communities is a priority activity. These requests are at a rate of at least once a week. Partners in these activities are the Churches, UNAIDS, Provincial Councils and community groups.

Conclusion:

Organizations for people living with HIV have a lot to offer in HIV prevention programs. FJN+ has the comparative advantage of working full time on HIV & AIDS; members are HIV positive people that attract the interest of people, hence the outreach sessions are usually conducted to full houses. Programs that involve PLWH are likely to obtain support of Donors.

AUDIT

SALE OF ASTHMA MEDICATIONS - A SNAP SHOT

Rohit Rambissesar.
Suva.

Introductions

Treatment in asthma normally includes use of preventors and relievers. An increase in sale of relievers versus minimum sale of preventors prompted to conduct a study to find actual sale variance between these two dosage forms.

Method

Purchase and sales data was analyzed for a period of three months starting from 1st January and 31st March 2007. This was done via a physical count and only included one Suva based pharmacy. Prescriptions, both from private and hospital, were only analyzed for asthma medications.

Result

	Salbutamol	Betide	Flixotide	Sal. Neb	Salb Elixir	Seretide	Others
Jan	170	-	-	-	12	-	-
Feb	270	12	6	6	6	6	-
March	190	-	6	-	-	-	-

Discussion

The main aim of this study is to stimulate discussion within the medical profession on the way asthma is treated in this country. As seen from above figures for sale of relievers greatly outnumber sale of preventors. Normal asthma treatment protocol would suggest that preventors' usage should be more or equal to reliever usage if asthma management is under control. This analysis asks the following:

(a) why is sale of relievers so high

(b) who prescribed them initially and are patients been monitored

(c) Are preventors not used because of cost

(d) How many sufferers have ownership of nebulizers?

(e) Are doctors aware of newer agents available on market

(f) Is use of peak flow meters encouraged

(g) What is the incidence of death due to asthma

(h) Are patients self prescribing.

Finally I trust some sort of protocol is adopted within the profession to manage asthmatics. More detailed trials need to be undertaken to get a better impression of the present snap shot.

REVIEW ARTICLE. 3.2

AVIAN FLU: IS IT REALLY A THREAT TO FIJI?

Dr Wame Baravilala
UNFPA, Suva.

General

Pacific Ministers of Health were alerted to the potential of an avian flu epidemic at the biennial Minister's meeting in Apia in March, 2005. While Pacific Island countries need to take the threat of H5N1 avian flu seriously the preemptive actions of ministries of health and the World Health Organization (WHO) and the rapid response capability of the Pacific Public Health Surveillance Network (PPHSN) of the Secretariat of the Pacific Community (SPC) and its e-mail arm, PacNet, has the potential to provide adequate warning for firm public health measures to be put in place,should a pandemic eventuate. As was demonstrated with Severe Acute Respiratory Syndrome (SARS) the initial expectation of high numbers of deaths did not eventuate and did not even approach the numbers of deaths attributed to the "common flu" each year. This result however was due to rapid information exchange between and within countries, the political will to direct resources for training of health personnel, identification, containment and isolation of cases and the leadership role of agencies such as WHO. A similar strategy for dealing with Avian Flu is necessary if Fiji and the rest of the Pacific are to survive a pandemic. The 1918 influenza pandemic was devastating for several Pacific Island Countries and Territories. Mortality rates of 25 per cent of the population were reported in Samoa, 15 per cent in Tahiti and 5 per cent in Fiji and Guam.

Avian Flu

The H5N1 virus is one version of the influenza A virus commonly found in birds. Unlike seasonal influenza, where infection ranges from mild to serious symptoms in most people, the disease caused by H5N1 is far more severe and occurs rapidly, with pneumonia and multi-organ failure commonly seen. There is controversy in the scientific community about whether or not Avian Influenza H5N1 has the capability to mutate and spread from human to human but most virologists argue that the possibility exists. In addition epidemiologists think the world is overdue for a global influenza pandemic, based on similar occurrences in the past. Historically global influenza pandemics have caused the deaths of a disproportionate number of young children. It is interesting that a virus carried globally by wildfowl, including ducks, swans and geese can cause mortality in domestic fowl, especially where these are raised in high concentrations and severe morbidity and mortality in humans. WHO is of the view that the Pacific could be affected by the migratory patterns of wild birds from Eastern Asia to Papua New Guinea. Then into the Solomon Islands.

For most of the Pacific isolation confers a degree of protection, but only in terms of delaying the arrival of the pandemic. Another factor that makes it unlikely that the H5N1 virus will mutate in this region is the low density model of poultry production in most island countries and the generally low population density in areas where there is commercial poultry farming. While Vietnam, Turkey and Indonesia have featured in the news because of the outbreak there the positive news coming out of those countries is that Avian Influenza is less lethal to humans if diagnosed and treated early.

Regional and Global Preparation

Since the Pacific Health Ministers' Meeting there have been meetings in the region to raise the awareness of Pacific countries on the potential devastation that an Avian Flu epidemic may bring. WHO were the first to organize a regional meeting at which Avian Flu and Flu Preparedness was discussed. In March 2007 the Secretariat of the Pacific Community called a meeting of Pacific Island countries to start the process of flu preparedness. This was the first meeting of the Pacific Island Pandemic Taskforce. The meeting attracted 80 participants and had been organized with the following objectives:

Agree formally on the composition and terms of reference for the Pacific Island Pandemic Taskforce.

Provide an open forum for the discussion of PICT National Pandemic Influenza Preparedness Plans.

Identify areas of the pandemic planning process for which PICTs require strategic support.

Update PICTs on technical developments in the area of pandemic preparedness planning.

Discuss pandemic influenza planning in the context of the new International Health Regulations and the Asia Pacific Strategy for Emerging Diseases.

Discuss regional coordination to pandemic events.

Provide expert advice and feedback to SPC on the planning, implementation and monitoring of the Pacific Regional Influenza Pandemic Preparedness Project.

By all accounts the meeting was a success. Avian Flu is in fact more than a regional concern. In 2007 there are at least 67 completed

or scheduled national, regional or global meetings, workshops or consultations at every level of government and civil society, to discuss and prepare for Avian Flu and other possible pandemics.

United Nations Preparation

Early in 2006 the UN agencies in the Pacific gathered in Suva for a week to prepare Avian Flu preparedness strategies for their organizations. The participants were broken into smaller groups responsible for producing plans to cope with various aspects and stages of a global and regional pandemic. Even after the meeting there were frequent e-mail exchanges to finalize documentation and office plans. A contingency plan has been developed for UN staff and dependents, should an epidemic or pandemic develop. WHO is the main agency responsible for execution of the plan. For UN agencies the main points of the contingency plan that they are expected to implement include agency preparedness and staff education to include appropriate responses to an epidemic, including implementation of simple public health strategies e.g. hand washing, protecting coughs and wearing masks. There is low threshold for staff quarantine/isolation and sick leave in the event of symptoms developing in family members or themselves. Details of travel and meeting restrictions, deferral or cancellation have also been considered.

Clinical Features of Avian Flu

Modes of Transmission

Human influenza is transmitted by inhalation of infectious droplets, by direct contact and perhaps by fomite contact, with self-inoculation onto the upper respiratory tract or conjunctival mucosa. For H5N1 infections, evidence is consistent with bird-to-human, possibly environment-to-human, and limited, non-sustained human-to-human transmission. Ten years ago exposure to live poultry resulted in the onset of illness in humans a week later. However there is no significant risk related to eating or preparing poultry products or non sustained exposure to persons with H5N1 disease. The information coming out of southeast Asia is that most patients have had a history of direct contact with poultry, although not those who were involved in mass culling of poultry. Human-to-human transmission of H5N1 has been suggested in several households and in one case of apparent child-to-mother transmission. The risk of nosocomial transmission to health care workers has been low, even when appropriate isolation measures were not used. .

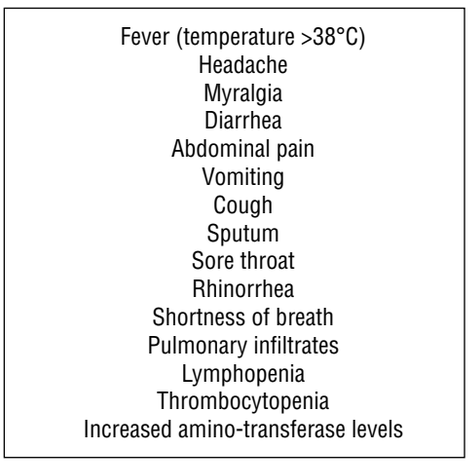
Initial Symptoms

The clinical spectrum of influenza A (H5N1) in humans is based on descriptions of hospitalized patients. Atypical presentations such as encephalopathy and gastroenteritis have been reported. Most patients have been previously healthy young children or adults. The incubation period of H5N1 may be longer than for other known human influenzas with ranges of up to eight days being reported. Most patients have initial symptoms of high fever (typically a temperature of more than 38°C) and an influenza-like illness with lower respiratory tract symptoms. Upper respiratory tract symptoms are present, but not as often. Patients with H5N1 rarely have conjunctivitis. Diarrhea, vomiting, abdominal pain, pleuritic pain, and bleeding from the nose and gums have also been reported early in the illness (see Fig 1).

Clinical Course

Lower respiratory tract manifestations develop early in the course of illness and are usually found at presentation. Dyspnoea usually develops less than a week after the onset of illness. Respiratory distress, tachypnoea, and inspiratory crackles are common. Sputum may be bloody and its volume is variable. Virtually all patients have clinically apparent pneumonia with X-Ray changes including diffuse, multifocal or patchy infiltrates; interstitial infiltrates; and segmental or lobular consolidation with air bronchograms. Pleural effusions are uncommon. This process is a primary viral pneumonia, usually without bacterial infection at the time of hospitalization. Progression to respiratory failure has been associated with acute respiratory distress syndrome (ARDS). Multi-organ failure, with signs of renal and perhaps cardiac compromise, including cardiac dilatation and supraventricular tachyarrhythmia, has been reported. .

Figure 1. Clinical Presentation



Laboratory Findings

Common laboratory findings have included leucopoenia, particularly lymphopaenia; mild-

to-moderate thrombocytopenia; and slightly or moderately elevated amino-transferase levels. Marked hyperglycemia, perhaps related to corticosteroid use, and elevated creatinine levels have also been reported. Diagnosis of H5N1 has been confirmed by viral isolation, the detection of H5-specific RNA, or both methods. Commercially available rapid antigen tests are less sensitive in detecting H5N1 infections than are RT-PCR assays.

Management

Most patients hospitalized with H5N1 require ventilation within 48 hours after admission, as well as intensive care for multi-organ failure and sometimes hypotension. In addition to empirical treatment with broad-spectrum antibiotics, antiviral agents, alone or with corticosteroids, have been used in most patients, although their effects have not been rigorously tested. Starting these interventions late in the course of the disease has not been associated with an apparent decrease in the overall mortality rate, although early initiation of antiviral agents appears to be beneficial.

Avian Flu Vaccine and Antiviral Treatment

In April this year the US Food and Drug Administration (FDA) approved the first U.S. H5N1 virus vaccine for Humans. The vaccine could be used if the H5N1 avian virus were to mutate and develop the capability to spread efficiently from human to human. During such a pandemic the vaccine may provide early limited protection in the months before a specific vaccine tailored to the pandemic strain of the virus could be developed and produced. The vaccine was obtained from a human strain and is intended for immunizing people between 18 and 64 years who could be at increased risk of exposure to the H5N1 influenza virus because of their occupation of close contact with an infected individual. The H5N1 influenza vaccine immunization consists of two intramuscular injections, given approximately one month apart.

The manufacturer, Sanofi Pasteur Inc., has sold the vaccine to the US Government for inclusion within the National Stockpile to be distributed by public health officials if needed. With the support of FDA, the U.S. National Institutes of Health and other government agencies, Sanofi Pasteur and other manufacturers are working to develop a next generation of influenza vaccines for enhanced immune responses at lower doses, using technologies intended to boost the immune response.

People infected with H5N1 should be treated with the antiviral drugs – Tamiflu (oseltamavir) and zanamavir - in order to reduce viral load. Amantadine and rimantadine have been tried in Asia but were not effective. In general agencies need to stock sufficient Tamiflu, for example, for 30% of staff and dependants. Tamiflu has to be taken within 48 hours of the emergence of symptoms (dry cough, muscle pains, sore throat, headache, fever, weakness and tiredness) if it is to be effective and ensure survival. With the common flu Tamiflu reduces the length of the symptoms of the illness by about a day. Most human case fatalities from H5N1have been due to pneumonia caused by the virus itself. Tamiflu may reduce the likelihood of pneumonia developing but data to confirm this is limited. If the virus mutates, as it needs to in order to cause an epidemic of person to person spread, Tamiflu may be ineffective or very rapidly meet with resistance. The use of Tamiflu for prophylaxis is unproven.

Mortality from Avian Flu

Almost 300 people worldwide have been infected with this virus since 2003 and more than half of them have died (see Fig. 2). To date, H5N1 has remained primarily an animal disease but should the virus acquire the ability for sustained transmission among humans, people will have little immunity to this virus and the potential for an influenza pandemic would have grave consequences for global public health. In contrast to 1997, when most deaths occurred among patients older than 13 years of age, recent H5N1 infections have caused high rates of death among infants and young children. The case fatality rate was 89 percent among those younger than 15 years of age in Thailand. Death has occurred an average of 9 or 10 days after the onset of illness, and most patients have died of progressive respiratory failure.

The occurrence of H5N1 in Southeast Asia has occurred in paralleled with large outbreaks of avian influenza A (H5N1), although the avian epidemics in 2004 and 2005 rarely led to disease in humans. The largest number of cases has occurred in Vietnam. The frequencies of human infection have not been determined, and sero-prevalence studies are urgently required. The expanding geographic distribution of avian influenza A (H5N1) infections, with outbreaks in Kazakhstan, Mongolia, and Russia, indicates that more human populations are at risk.

Pathogenicity of H5N1

Scientists have discovered a potential reason to explain why the H5N1 strain of bird flu is so much more deadly to people than standard human flu's. A team in Vietnam compared people infected with the different and found that the bird flu virus triggers a massive inflammatory response, which often proved fatal. The Vietnam team looked at the viral load and at how the immune system had responded to infection. It was found that the patients infected with H5N1 had much higher viral loads in the

throat than those patients infected with the human flu virus. The markers of viral load were highest in the H5N1 patients who had died. The presence of high levels of H5N1 virus triggered a release of cytokines which should control a body's response to infection. The highest levels of cytokines were seen in those with the highest viral loads - those who had died. In these cases there was also an associated loss of lymphocytes in peripheral blood.

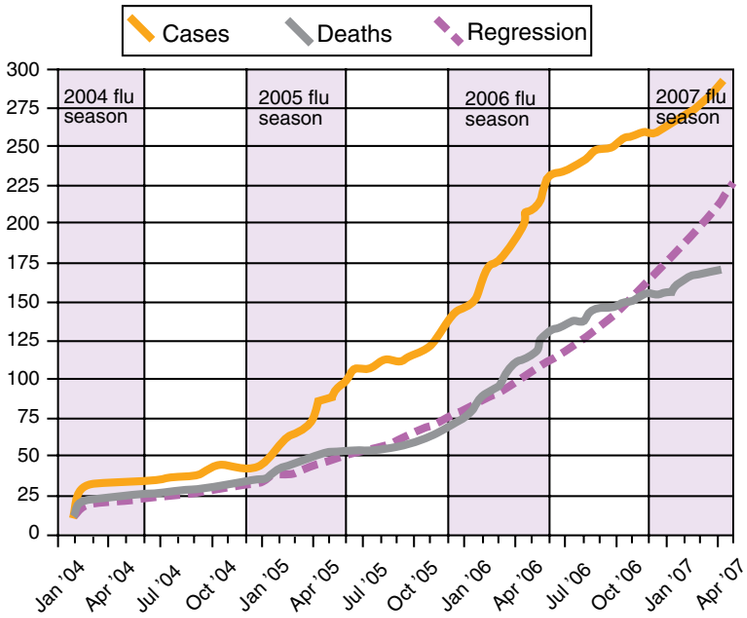
Is H5N1 Really a Threat?

History tells us that a large pandemic is now overdue but society is also much more sophisticated in the 21st century with excellent telecommunication services and rapid exchange of information. While there have been no reports of mutation of the H5N1 influenza virus to a form that can be rapidly transferred from human to human, the behavior of the virus in its current state to cause significant case fatality is a cause for concern. E-mail networks now exist to inform health care practitioners of the likelihood of emergence of epidemics. The least we can do is to be informed.

Preparation by GPs in Fiji and the Pacific

While the Pacific is isolated from south-east Asia and the former Soviet Union there are multiple daily flights into Fiji from Sydney, Auckland, Hawaii, Los Angeles and other capitals around the region. Ease of travel into the country will also mean ease of entry of an airborne virus. To obtain early warnings of impending epidemics or pandemics there is no better source than PacNet which is an e-mail "forum for communication regarding public health emergencies, including those of international concern. PacNet thus assists in implementing the International Health Regulations (IHR 2005) in PICTs. If an outbreak occurs, a message must be posted very quickly on PacNet - even if not all the information is available – in order to warn health professionals in the region about the potential threat and to encourage preparedness. (SPC)" General Practitioners in Fiji should endeavor to join PacNet which is run by the Public Health Section of the SPC, in Noumea. All that is required is to send an e-mail to:join-pacnet@lyris.spc.int .

Fig 2. Cumulate Human Cases and Deaths from H5N1 As of April 11, 2007



Probability of an Avian Flu Pandemic

"Although there is no certainty that an influenza pandemic will occur, it is a potentially serious threat that must be addressed. The Pacific is vulnerable to the introduction of pandemic influenza through the movement of people, migratory birds and legal and illegal trade in poultry and poultry products. To respond to such a threat, Pacific Island countries need effective preparedness plans and the resources and capacity to implement them. While some countries have developed, or are in the process of developing preparedness plans, and some surveillance and laboratory capacity, none of these have been tested for a pandemic scenario. The priorities identified by regional governments include improved surveillance, development and testing of plans, strengthened public health measures, and inclusion of more sectors/stakeholders in planning and implementation." (SPC)

NEXT ISSUE:

"GLOBESITY"... GLOBAL OBESITY!

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3.3 REVIEW ARTICLE

WOMEN & STRESS- ARE GENERAL PRACTITIONERS PICKING UP THE CUES?

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As a follow up of your last theme in The Fiji Practitioner, I address the issue of Women and Stress.Dr. Charmaine Saunders said, "When a woman is feeling 'stressed', the chances are strong that she is living her life by someone else's rules and to someone else's schedule".

I am not suggesting that women suffer more of worse stress than men, but only that they experience it differently, as indeed they do all of life.

I've had more than my share of the negative, having had to battle a chronic illness, so it's wonderful to know that there are millions of people out there who want to be happy and enjoy fully this beautiful world.

In writing this, I am less concerned with telling you what I already know than in sharing my learning process with you. I intend to be honest as possible, at the risk of being misunderstood or ridiculed. But then, I see risk-taking an important element in personal development.

Short-term stress can be easily overcome, but over a prolonged period the effects can be devastating. Long-term stress rids the body of its ability to fight off viruses and infections and had been linked with diseases such as cancer.

Once, we are sick, the healing process depends not only on rest but also on factors such as the presence of hope. The late Ainslie Meares, in his book, "The Wealth Within" wrote, "Life is better for us when we have a lower level of anxiety. Our mind has an inbuilt capacity to reduce the level of our anxiety; but our mind cannot exercise this capacity unless the circumstances are suitable."

In other words, one can avoid illness by being happy, active, and actively involving yourself in the process of living. Dr. Charmaine says, "Happiness breeds happiness. Mind and body in harmony provide all the necessary strength for happy, healthy living."

Recognising the Signs

Does your life lack joy? Are you always tired? Is life unmanageable? Don't wait until you are sick, depressed, or chronically stressed. Prevention is the key word, but we cannot prevent what we don't understand. Many women cannot eliminate their sources of stress quite easily, but by identifying them they can at least have the hope of improvement.

High levels of stress make you deeply unhappy and create sickness, but how do you recognize stress, and the damage it can cause?

The most common physical symptoms of stress are:

- Headache
- Stomach trouble
- Chest tightness.
- Lower back pain
- Tension at the back of the neck.
- Chronic constipation.

Other stress symptoms can be:

- Insomnia
- Loss of efficiency
- Loss of concentration
- Irritability
- Breakdown in relationships
- Lack of motivation.
- General downturn in life.

It's difficult to function well in any sphere of your life if you feel constantly stressed.

Women experience stress in different ways to men for many reasons: females are biologically different, live life from a female perspective which they learn from birth, and function emotionally and psychologically in a female way. We all know that there are irrefutable differences between men and women, but the degree of these differences are not important. What is important is the fact that everyone is not the same. Women do not necessarily suffer more stress or find coping with stress harder. Men and women can find themselves equally ravaged with this modern disease. Factors of temperament, lifestyle, education, socioeconomic status, upbringing, occupation, quality of relationships and so on need considering. Why then it is worth looking specifically at women and stress?

Women have their own history and story to tell in all civilizations and cultures.

In the Western countries, there has been a long and sometimes bitter struggle for recognition and respect. With this advent of women's liberation, much progress has been made. Some women would say, "too little, too late", but scores of women have stood up with pride for the right to be different, and yet have been treated the same. Why would we want to be just 'persons'?

Until women love who they are and stop trying to compete with men as if males belong to a different species, they cannot expect to make the best of themselves. Women have a right to equal opportunities to prove themselves, such as in the workplace, but beyond that, equality is a myth. Are all men equal? Of course they are not, nor women, nor any two people.

So, in my experience, women have to stop playing semantics and get on with the business of being the best individuals they can. There are plenty of women out there proving themselves everyday, working alongside men with equal competence, doing so-called 'men's jobs', and holding down senior positions in all arenas of society, not to mention the mothers and homemakers who choose to work in their homes rearing the

citizens of tomorrow.

Then why do women feel stress differently in this day and age? Dr. Charmaine explains that, " biological considerations include these exclusive functions of women: pregnancy and childbirth, menstruation, menopause and the cessation of menstruation, breastfeeding, and such phenomena as breast cancer, cancer of the cervix, postnatal depression, and premenstrual tension." Apart from these obvious externals features exclusive to women, our whole physical structure is unique and brings about a set of complex and interwoven behaviors. These behaviors can cause their own special brands of stress.

For women today, the sources of stress are essentially the same as those faced by men. The differences come into focus when the way in which it is felt and the methods of coping are examined. The three main areas of human existence that are vulnerable to stress are: physical, emotional, and work-related.

Physical stress

How can specific physical and biological realities cause stress in women? If stress is not managed or there is not awareness about levels of stress (just as we are now conscious of blood pressure and cholesterol), it simply gets out of control.

The rampant misunderstanding about stress makes the average person confused when attempting self-monitoring or seeking professional advice. You hear the line: "Everyone suffers from it", "There is nothing you can do." All these lines are common catch cries in conversations about stress. Women are particularly prone to playing down stress levels and minimizing symptoms.

Women and men are not living with any more stress today then they were in earlier periods of history. What is seen is that much more is expected of women today. Once it was enough just to 'be'; now one must show productivity, results and achievements every day. Much more must be crammed into sixteen or so waking hours. There fore, the basic matters of fatigue and stamina must be dealt with. Women are taught at an early age to cope, not to make a fuss. So they suffer in silence, pretending they don't feel irritable, tired, or tense. They are the chronic whingers, the hypochondriacs of the stress world, but in the main women get on with it. Women with children are often simply too preoccupied to nurture themselves and give themselves adequate periods of rest and relaxation.

Men generally talk about the pressure the work under and responsibilities they have that create stress. Pressure is almost a source of pride to them. Many of them even insist they need high levels of stress around them in order to do their best work! That view is very limited and guaranteed to bring disaster in the long-term.

Emotional stress

The reasons for emotional stress in a woman's life are twofold: having to deal with her own identity, ambitions, and needs while coping with demands of people and events; and all the various relationships that constitute her world, particularly the personal ones.

Work-related stress

'Work' has many different meanings for women, but it is the relationship of work to role that evokes the stress. For instance, a woman who is a working mother really wears about six hats through her daily business: wife, mother, employee, housekeeper, workmate and then her sundry personal roles such as daughter, friend, sister, etc. each role requires a prescribed set of behaviors and creates its own stress potential. In the best of all possible worlds, women would be able to juggle all their duties, responsibilities and personal interests with no wear and tear to the psyche or the body, but in the real world the damage can be substantial if moderation and stress management is not practiced. Even a woman with only one major role, say careerist, has to keep on her toes at least as much as her male counterpart. She has to endure criticisms and sanctions of a society only too ready to find fault should she break any of its mores or fail in its expectations of her.

Now you must add self-delusion to your ever growing list of stress traps. Women are often not supportive of other women. In striving to have it all, a race of superwomen has been created who flirt with dangerous levels of stress everyday. You need to learn to take it easier on yourself and those around you. Stress manifests in a woman's life in several major ways and a thousand minor ways. The trick is to be aware of the danger signals and monitor the levels in order to reduce the negative effects. The symptoms that I have previously outlined, apply to any woman who is unsure id she is suffering from the negative effects of stress. You should ask yourself if you are neglecting or overloading any part of your life. Does each day feel comfortable or does it feel like a strain?

Are you balancing your emotional, physical, intellectual, spiritual, or relationship needs? Commonsense and an honest approach will supply most of the answers you require. Professional or medical intervention should only be necessary if stress problems have been neglected over a long period of time and the cumulative effects are severe. Following are five associated conditions that are linked to stress, but which also have their own specific descriptions and consequences:

- Depression, Anxiety, Fears & Phobias, Addiction, Anger & Violence.

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3.4 REVIEW ARTICLE

BROKEN HEARTS AND BROKEN BONES

Rajeshwar Sharma, Suva.

A case of medical discrimination?

While repairing the roof, John slipped and fell. He was rushed to his family doctor, who after initial tendering ordered x-rays. Detection of broken forearm bones led to specialist referral; hospitalization and surgery for internal fixation ensued. However, John was well looked after by the doctors, nurses, physiotherapists, and other staff. Upon discharge he was closely followed up by his GP. His friends, family—and even his employer, who accepted the six weeks sick-leave—were very sympathetic: the support and caring helped in speedy recovery.

When Jim's long-time girlfriend dumped him, his world fell apart. Long sleepless nights followed relentless days; his broken heart seem to shatter further repeatedly every moment. Agony amplified accordingly. Constant retching made eating impossible; the never-ending misery intensified a thousand fold. The visit to his family doctor was unhelpful as the prescribed antacids and her advice; "just forget her, there are plenty fish in the sea", made matters worse. Even his family and friends avoided him: his co-workers became even more demanding. The spirit—bottled one—became his constant companion, but even alcohol could not expunge his anguish. Isolated and uncared, his devastation was complete.

Management of broken bones and broken hearts demonstrate the two extremes of medical practice. Psychological disturbances such as heartbreaks, grief, bereavement, professional burn-out, stress reactions, and minor psychiatric illnesses tend to get disregarded because their mental processes are not tangible. This leads to the perceptual distortion that these disorders are not real. If care is not taken, medical discrimination can result.

However, the normal as well as abnormal mental processes, together with the mind as a whole, are as corporeal as any other bodily function. Modern scientific developments have evolved such that physicality of the mind is explicitly evident: the demons and devils have to take a back stage. Indeed, all psychiatric disorders, even "minor" ones, have concrete basis.

To delve further, it is now clear that the constituents of the mind—thoughts, feelings, memory, and such—are closely associated with the brain. Neurological activity correlates with mental function: alterations of brain physiology leads to changes of the mind's components. For example, alcohol and drugs influence thinking, feeling, and behaviour. Their mode of action, furthermore, has become clearer and shows that the mind is just an extension of the brain.

Further evidence to substantiate the physical nature of the mind is given by the observation that even simple things as blood glucose levels—that alter neural metabolism at different thresholds—affect the mind greatly. Take for example BD who suddenly went berserk and started talking nonsense. His blood glucose turned out to be 2.1 mmol/dL. Intravenous correction rapidly reversed his mental disturbance.

The discovery of antipsychotics, antidepressants, tranquilisers, and lithium; the partial but significant reversers mental disorders, played an important role in determining the biological basis of the mind—and at the same time diminishing the importance of superstition, sin, and Satan. Mechanisms of actions of many of these drugs have been worked out and show how alterations of neural activity result in direct brain-mind correlate of clinical benefits as well the dreaded side-effects.

For example, Selective Serotonin Reuptake Inhibitors (SSRI)—such as fluoxetine, paroxetine, and sertraline—block reuptake of serotonin that in the short term leads to increase of the neurotransmitter in cell body and dendrite but not in the terminal axons (Norman, 1999). Consequently the 5HT1A autoreceptors are activated and the neural activity decreases. However over a longer period of time, with continued dosing, these autoreceptors are downgraded. This leads to increased neural firing that, with ongoing blockage, avails more serotonin postsynaptically to give rise to the antidepressant benefits as well as the verification that altered neural physiology leads directly mental changes.The actuality of the psyche is thus reinforced.

Structural studies also demonstrate the close integration of anatomy and psychological phenomena. In late 1960s, Dr Penfield reported a series of experiments in which direct electrical stimulation of association areas of the brain produced vivid life-like memory recall. The subjects felt as if they were reliving the experiences. Stimulation of the in reticular activating system (RAS) has so profound effect on the consciousness that it is referred to as the "consciousness switch" (Hilgard et al., 1974).

Anatomical changes to parts of the brain from induced lesions in experimental animals and alterations from diseases, toxins, injuries, or degeneration also show the mind-brain linkage. Recent advances in imaging technology, as characterised by PET scan (positron-emission tomography) and MRI (magnetic resonance imaging), show how close neural activity is to the mental faculties. Functional MRI, for example, correlates cell activity from specific

parts of the brain to such tasks as reading, thinking, problem solving, and the like (Wade & Tavris, 2005).

Recent scientific breakthroughs—especially with application of quantum physics—are helping overcome the three key perceptual difficulties in acceptance of the physicality of the mind. Models to overcome the first difficulty of how the neural activity gives rise to thoughts, feelings, and other psychological phenomena have now evolved. For example, the baser-hologram theory of brain function explains how axonic impulse generates electromagnetic waves that are amplified to form the components of the mind (Sharma, 2003).

In Einstein's tradition, thought experiments (Zurav, 2005) can be used to overcome the second perceptual difficulty of visualization of the mental processes. The brain-mind complex can, for instance, be conceptualised using the paradigm of electric light bulbs in an enclosed room from which light cannot escape outside. The bulb represents the neurons; the light depicts the waves that make up the mind; and the walls of the room stand for the skull. In accordance to this model, the reality of mind is unquestionable, just like that of the light to an observer placed outside the room: and the mind and the light both cannot be seen but both have physical existence.

The above representation can be used to envisage thoughts and feelings. Each wave type forms the basis of respective emotion. Anger, for example, is produced from waves of certain type that can vary in intensity by fluctuating amplitude. Different waves interpose to form thoughts and ideas. Note that feelings are associated with colours and thoughts generate feelings because both are made of brain waves. In fact, light bulbs in an enclosed room thought experiment can help elucidate many brain-mind complex functions.

The final frontier of consciousness is also being overcome with the latest scientific developments. Consciousness is now perceived as a flux that is the result of interaction of amplified brain waves with certain parts of the brain, collectively called consciousness devices. Since this interaction is variable and only involves a very small part of the total set of waves generated, our awareness changes rapidly and we only perceive a very small portion at any given time. Nevertheless, all faculties of the mind, including consciousness, are substantial.

Although highly variable, the activity of the consciousness devices is precisely synchronised. This gives the perception of wholeness of self. However, since these devices are under the influence of many factors via the reticular activating system, in certain situations, such as traumatic experiences, the brain generates very intense amplified waves. Above a certain threshold these waves disrupt the intricate synchrony of the consciousness. Psychological disturbances occur and, beyond a particular extent, overt psychosis results.

Broken hearts are therefore as real, and as physical as, broken bones. The heart in this context refers to the core of ones emotions—the break connotes the disruption of consciousness devices' synchrony. Thus Jim's heartbreak can be easily explained in concrete terms. When his lover dumped him, his brain generated excessive amplified waves that disconcerted his consciousness devices such that he felt his world fall apart.

The combined effect of very intense brain waves and disrupted consciousness can expound Jim's dire situation. Accordingly the core of his emotions broke up to give him the perception of hopelessness and helplessness. Moreover, these reactions were further augmented by activation of his neuro-humoral stress responses. No wonder Jim felt so miserable. Indeed, heart breaks are very painful, as are their conventional counterparts. The disruption of the consciousness synchrony enhances the impact of suffering in psychological to make heartbreaks appear even more agonizing.

Interestingly, management of heartbreaks and other minor psychological disturbances such grief, bereavement, mild depression and the like, can easily parallel ministration of the conventional diseases. For instance, primary care can be started by the general practitioner who may refer the client to a psychotherapist if the need arises.Later the GP still needs to follow up the affected closely. These highly stressed individuals are more prone to conventional diseases as well and holistic approach is necessary.

Above all, all the concerned parties—friends, family, health care givers, and employers—need to be understanding; just as they would have been if the patient had a broken bone. This is a very significant area because the natural tendency is for others to avoid the sufferer. Doctors are in a position to carry out public health education to remedy this. Social support is critical to genuine well-being and no sufferer of any disorder should be neglected.

In short, scientific evidence has now evolved such that normal as well as abnormal mental processes have been verified to have a physical basis; and it is no longer feasible to disregard any psychological disturbances, no matter how "minor" they may appear. Simply put, the patients' symptoms are real and they should be considered so—for failure to do so would mean medical discrimination.

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3.5 REVIEW ARTICLE

SANDWICHES AND SEPTIC WOUNDS
THINKING OUTSIDE THE BOX

Rajesh war Sharma,
Suva.

Let us consider three difficult wound care cases;

1. A thirty-five year old, with a three year history of diabetes, comes in with a very foul smelling sepsis on his right ankle area that he has been having for the previous three weeks. Earlier he was admitted at a major hospital for the diabetic sepsis. Although his blood glucose levels were fairly well controlled, his lesion, that measured ten by eight centimeters, kept deteriorating; he was told that his right leg had to be chopped off. He refused amputation against medical advice and was discharged as a result. With no-where to go he comes to you.

2. A thirty-eight year non-diabetic presents with four year history of a foul smelling discharging wound in the middle of his right leg. His problem began when he was involved in a motor-vehicle accident. He ended with a compound fracture of his right tibia. Despite specialists' treatment, that included a prolonged antibiotic course, his injury did not heal completely. He developed such a foul smelling sepsis that it was difficult for others to come within a couple of meters: his close friends avoided, his marriage broke up, and, swamped with shame, he became an alcoholic. After trying several therapies—both conventional as well as traditional—he presents to you as a last resort.

3. A forty-two year old presents with four centimeters long infected abdominal wall wound that resulted from post-op dehiscence. His surgeon told him "to change his dressing at home and come back after two weeks". Horrified, the patient presents to you with a twenty centimeter longitudinal midline scar in which the top end had opened up to a depth of a centimeter. The aggressive mutilation shows a yellowish suppuration. What do you do?

Wound care does have its challenges. Not only injury mending is essential for life, non-healed lesions lead to much morbidity. Nevertheless, wound healing itself is a natural process: the body repairs itself. However, this process is hampered by local as well as systematic factors, and accordingly a holistic approach needs to be taken for when dealing with difficult cases such as the ones mentioned above.

We humans have evolved a great deal and do not (literary) lick our injuries unlike the dogs. Thus, for local application we have developed a plethora of dressings that can be used in wound care. Gone are the days of very strong antiseptics as well as dry dressings: many surgeons prefer plain normal saline instead. Honey, antibiotics, oils and other substances are also employed.

Some high powered categories are absorptive fillers, alginates, foams, hydrocolloids, hydrogels, and transparent films. These commercial preparations, besides being expensive, are not without side-effects. In the local set up we are forced to use cheaper coverings in most cases. The first dressing used at home often involves traditional medicinal products. At the health care institutions the common substitute is either normal or an antiseptic dressing.

In general, wound care involves local as well as systematic considerations. For long-standing and/or complicated septic wounds, in addition to the local care, the blood supply needs to be checked as arterial insufficiency or venous stasis—as in varicose veins—will delay healing. In addition, systematic factors such as general health, nutritional status, diabetes, anemia, smoking, stress, and the like also affect wound repair. Deficiencies of micro and macro nutrients need to be considered as well. Finally, drugs like steroids, anti-inflammatory drugs, and chemotherapeutic agents also affect healing.

Wounds, of course, come in all sorts of sizes and shapes. A few are clean but most that present to the health care provider are infected, soiled, and foul smelling. One of the challenges is to keep the wounds uncontaminated. With the days of using strong antiseptics long gone and even soap is contraindicated; normal saline is the substance of choice for cleaning.

Given the task of dressing wounds twice daily gave me the opportunity to observe minute alterations; I followed the natural history of wounds and gained several insights. However, the twice daily changing for many patients soon became a chore, and I was motivated to explore ways to enhance faster healing with the logic that expeditiously healed wounds would lead to fewer dressings in total. In addition, I wanted an automatic cleaning system that would result in lesser work load.

My mind drifted to my earlier problem of smelly feet that I had resolved with special shoe-soles that were impregmented with activated charcoal. They had worked wonderfully well. As charcoal is also utilized as an antidote as it absorbs poisons, I took an instant interest and looked up this material.

Charcoal, n a black substance formed by heating wood in an atmosphere of restricted oxygen. Charcoal is a powerful absorber of gases and of fine particulate matter and can

be used as an antidote to various poisons, a deodorant, a filter and a remover of intestinal gas. Activated charcoal has been treated to increase its absorptive properties (Youngson, 1992:121).

Although literature search did not reveal it being used as a wound poultice, on paper charcoal sounded like an ideal substance for dressing as it would absorb the toxins and other unwanted material. My trials soon proved this: charcoal increased the rate of healing to up to twice the regular rate. However, it when applied directly to the wound, it resulted in a mess that took twice as long to clean.

The breakthrough came when I was eating a sandwich. Why not put the charcoal inside the lint pads to make a charcoal sandwich? I asked myself. Having made the connection, I tried the new method. I smeared activated charcoal paste in between two gauze pads and applied the "sandwich" such that the charcoal did not come into direct contact with the wound. The effect was dramatic! The following day when I opened the dressing, the wound was so clean that it glistened.

Seeing much cleaner lesions the following days turned the chore of twice-daily dressings into an exciting experience. The clients noticed the benefits and began to demand the "black sandwich". Moreover, I was able to attain my original purpose of reducing the total number of dressings as the wounds would heal faster. This led to a build up a large volume of anecdotal evidence during the past nine years.

Although, for scientific purposes this anecdotal evidence is not enough as medical science, being practiced within the scientific practitioner model, demands empirical research using controlled trials, numbers may not mean much if many cases within a trial are minor ones. Sandwiched activated charcoal thus needs further conclusive research. My charcoal-sandwich dressing made an impact, nevertheless. The genuine test for the sandwich method came up with the three cases mentioned above.

The first time I met the non-diabetic leg wound, the smell was so bad that it was difficult to go within two to three meters of him. The first sandwich dressing resulted in expression of half a cupful of exudate the following day. The second day dressing reduced the foul smell significantly. After another two days' dressing using the activated charcoal, the foul smell disappeared.

This event was characterized by intense emotional reaction: the patient cried tears of joy. He was so happy just to be free of the dreadful smell that had ruined his life. With continued twice daily sandwich dressing, he attained full recovery in three weeks. Though this may seem such a long time, it should be considered within the context that he had the wound for four years and that it had not healed even though he had tried almost everything else.

The diabetic who had refused amputation had a similar experience. Within a couple of days his exudate was reduced to a minimal. For him, because of the diabetes, I added local application of metronidazole power, and continued to monitor his blood glucose levels regularly. Within three days definite signs of healing became evident. With continued sandwich dressings the wound healed completely in three weeks. His leg was not only salvaged but was as good as new with full function.

Thus when the infected abdominal dehiscence presented, I began applying the now much renown sandwich dressing. The result was dramatic: the infection subsided with a few days and the wound healed in ten days without the need for secondary stitching.

I used to be very apprehensive of diabetics presenting with foot sepsis for in my as well as many patients' minds diabetic foot sepsis means a certain amputation. With scores of diabetic sepsis healed after the charcoal dressing we have changed our minds to become much more optimistic.

Charcoal sandwich dressing has shown excellent results from my nine years' anecdotal evidence. However, a formal controlled trial needs to be conducted to investigate its efficiency. Until then, interested practitioners are welcome to try this novel approach. Both the commercially prepared activated and the home made charcoal can be used. The latter is cheap—one can make it at home using wood or coconut shell.

Chronic wounds result in a lot of morbidity and mortality. Commercial brand dressings, though effectual, are expensive. For a developing nation such as ours any innovation that offers cheap but effective alternative is always welcome. Even a single limb saved would mean a great deal, not only to the patient but to the nation as a whole. Charcoal sandwiches can not only can salvage legs, but have the capability to reduce health cost from reduced total dressings. They show a lot of promise that time will tell. For best results a holistic approach needs to be taken and local as well as systematic factors have to be catered for.

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SPECIAL REPORT

EXITING THE FIJI CIVIL SERVICE FOR MEDICAL PRACTITIONERS- A GUIDE TO NEW PRACTITIONERS.

Dr Neil Sharma, Suva

The Laws of Fiji under the Medical and Dental Practitioners Act, chapter 255 outlines the details of appropriate exit which needs to be followed in all future cases to the advantage of all concerned parties.

Section 30.-(1) Deals with the issue of medical practitioners who leave the civil service for reasons including dismissal, resignation or retirement. All such cases are notified by the Ministry of Health to the Chairperson of the Fiji Medical Council. The Chairperson in turn notifies the Secretary who then deletes the name from the medical register.

Under section 30.-(2) The practitioner now must re-apply to be maintained on the register. Provided administrative matters are in order then, (i.e. Arrangements for Bond clearance and duration of years of service), then and only then can the practitioner be cleared to enter private practice.

The practitioner then needs to register with the Fiji Inland Revenue Customs Authority (FIRCA) for a VAT and Inland Revenue Identification registration. (Tax Identification Number-TIN)

The Practitioner needs to register with the Local Town /City council and pay a business license /annually.

Setting up a practice in a commercial zone one does not require any special council clearance unlike for those who set up in a residential area where special clearance needs to be additionally sought from the council.

Seek and find a well accredited accountant to set up your ledges and possibly set up an accounting package into your computer system as your monthly Vat returns can be economically prepared in a small operation at the outset. Annual returns then are dealt by the accountant.

Your receipts, invoices and other financial documents must carry your TIN.

Due consideration must be given to signage size and number of cards placed in the media for notification.

Your Business card must not overstate your qualifications.

Join the Fiji College of General Practitioners for Continuing Medical Education and other professional activities and vocational training including the Certificate in Family Medicine a conjoint Course between the College and the Monash University of Australia. The College provides support in an isolated field with outreach programs, social interaction and professional development.

FROM WONCA WORLD COUNCIL

Dr Wahid Khan, Suva.

From: President FCGP
Subject: WONCA Council Meeting
Dates: 18th – 21st July, 2007
Venue: Mandarin Marina, Singapore

From WONCA Asia Pacific meeting:

President FCGP has been elected Member At large on WONCA Asia Pacific Executive Council for the next triennium.

Fiji has been tasked to associate with GPs in other South Pacific Islands so that they can be brought under the WONCA umbrella.

Next WONCA AP Conference in Melbourne 1st-5th October 2008.

WONCA is ready to host member organizations (mo) on the GFD website, free of charge. Initial approach to be made to the Webmaster. The new Webmaster is Dr. Jim Vause. MOTION: THAT FCGP REQUESTS WONCA GFD TO HOST AN INTERACTIVE WEB SITE FOR IT.

GFD is already hosting our GP Journal on its website. GFD request that in future publications of our journal, each article to carry a small synopsis which would make it easy for readers to access. For the past volumes, the subject and author indexes will suffice. GFD online CME soon to be available

WONCA will make available to MOs a copy of the ICPC2 classification system for incorporation into any Patient info system , as long as these programs are given FOC to its members

WONCA membership dues are sealed for the next triennium at the 2005 declared level of membership- so our membership dues remain same.

MOs have been requested to engage MOHs in dialogue to enhance the value of General Practice and to promote the quotation "Every Family MUST have a Family Doctor". This will certainly advance the value of General Practice in Fiji.

There is a greater WONCA/WHO collaboration on mental health for the GP. Funds are being made available and MOs are being encouraged to access this- FCGP to incorporate this in the Master Plan

WONCA requests MOs action on (a) environment (b) women in General Practice (c) Diabetes/hypertension (d)Endorse the HER document.

Letters to Editor

Dear Sir,

Vaccine preventable diseases: prevention and surveillance

Most vaccine preventable diseases are serious and highly communicable. However, these infections can be prevented easily and inexpensively through vaccination. For Fiji, there are currently 9 diseases that are covered under our national immunisation schedule: hepatitis B, polio, tuberculosis, diphtheria, pertussis, tetanus, Hibinfections, measles and rubella. The main goal of our immunisation policy is to increase the coverage for all antigens covered in the Infant schedule, i.e. a fully immunised child at the age of 12 months.

There are regional targets for the elimination of diseases like measles (2010) and for the control of hepatitis B (2012). For instance, measles elimination is defined as "a dynamic situation in a large and well populated geographical area where endemic measles transmission cannot occur and where sustained transmission does not occur following the reintroduction of measles virus by an imported case. All isolated cases and chains of transmission should be linked to importations. To maintain elimination, regions must sustain high population immunity through vaccination."

In the late 1990s, WHO introduced a surveillance system for the region to monitor the trend of three vaccine preventable infections: acute fever and rash (measles and rubella), acute flaccid paralysis (polio), and neonatal tetanus. In this active surveillance, clinicians in hospitals are required to report cases of any of three aforementioned promptly to the designated Hospital Coordinator or National Coordinator. The Coordinator then reviews the case details, arranges investigation as necessary in collaboration with the clinician. Because these three infections often cause severe illness, it is likely that at least some of these cases in an outbreak will present to hospital and be picked up through this surveillance system.

In Fiji, there are currently 21 sentinel sites actively participating in this hospital-based surveillance. The hospital general outpatient departments are usually the first point of contact with the health care system. Thus, cases of AFR or AFP need not be admitted to be picked up by the surveillance system. Furthermore, surveillance for these infections is not confined only to the hospital-based active surveillance system. Fiji maintains a passive surveillance system through its weekly notifiable disease reporting in which all medical practitioners (under the Public Health Act) – whether in the private or public sector - are required to notify public health authorities of any designated communicable disease listed in the Register.

Absence of a vaccine preventable disease like measles, however, does not guarantee absence of risk or disease. If immunisation coverage is not sustained at very high levels among succeeding cohorts of children, e.g. critical coverage level of at least 95% and over per year, there is low herd immunity as the number of susceptibles accumulates through the birth of babies every year, and large numbers of children are left vulnerable to contracting measles if an infectious case enters the country.

This could have been the explanation of the measles outbreak in Fiji in 2006 in which there were 132 cases of measles documented over a five month period. Fortunately, there were no deaths or any complications in the affected children. This outbreak necessitated a supplementary immunisation campaign to reduce the number of susceptible children, resulting in vaccination of 89,747 children between 6 months to 6 years of age, achieving a coverage of 98% within a 6-week period.

In the instance of the identification of a case that fits in the case definitions for any of the vaccine preventable diseases, the hospital and national coordinators should be notified immediately by phone. A thorough case investigation should then be carried out, using case investigation procedures and forms. Laboratory testing using appropriate specimens should be carried out on all cases either suspected or fits in with case definition. Clinicians should maintain a high index of suspicion for acute fever and rashes or acute flaccid paralysis, as cases can present without the classical signs and be difficult to diagnose clinically.

It must be emphasised that the HBASS is "zero reporting", meaning that even if there is no case seen, a report would still have to be forwarded to the national coordinator. Thus, with good surveillance system and adequate routine immunisation coverage for all antigens, Fiji could put itself in a better position to prevent frequent outbreaks of vaccine preventable diseases like measles, and also to monitor further threats of an outbreak of such infections. In order to achieve these objectives, we as individual custodians of the health of our people, must meet the standards of professionalism required of us.

Dr Josaia Samuela,
Ministry of Health,Suva.

Dear Sir,

Do not suffer in silence!

As a follow up of your last two themes on "psychotherapy in primary care", I add the following comments.

When we have a medical problem, we consult a doctor. When the problem is emotional, we need to seek help from a psychotherapist. However, some of us find it difficult to reveal our thoughts and feelings to a stranger. We may find it painful to confront our inner turmoil and vulnerability, or we may feel ashamed to seek help. There is still a stigma attached to the idea of not being able to cope alone, as if asking for help is a sign of weakness. But this attitude prevents us from receiving the help we need.

In recent years, our lives have become more complex and our families more fragmented. Many of us are not surrounded by close friends or trusted family members, and so may need outside help in times of crisis. And an objective outsider can often help us gain insight or skills to solve our problems.

There are many different kinds of therapy. Some people respond more positively to one approach than the other but when you choose a therapist, don't worry too much about the approach or method. The most important aspect of therapy is that you feel relaxed, comfortable and safe.

"There are four basic requirements of therapy: warmth, empathy, genuineness and positive regard for the client." A person will gain the most value out of their sessions if they see them as an opportunity to learn skills. The duration of therapy depends on the effort you are prepared to invest and how willing you are to learn.

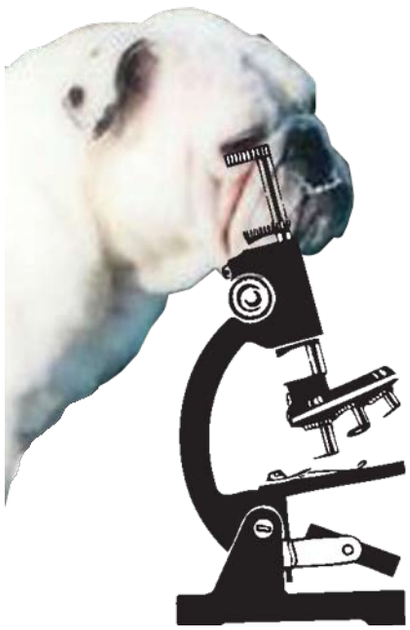
People often have misconceptions and build stereotypes with regards to what we think particular professions do in their work. Misconceptions and stereotypes about counseling professionals are particularly abundant. Despite the fact that a greater number of individuals, couples and families are using counseling services for particular needs, there are still a number of people who hesitate to seek the help they need because of their misconceptions about counseling or the negative stereotypes they hold about therapists. One of the main things that counseling offers us is the opportunity for self-discovery. The following questions and points are relevant in the counseling situation:

1. What can I discover about myself now that I do not need to solve my problems on my own?
2. Perhaps what I do know, and feel certain of, is contributing to my difficulties. I wonder how my beliefs and convictions look to someone else's perspective.
3. There could be comfort and even relief in confiding in a "neutral" party.
4. What if time is not the issue but rather my sense of ownership and responsibility about the problem I bring to therapy?
5. And finally, what if creativity in solving problems is more than similarity of experience?

Do not be the victim of your own or someone else's erroneous beliefs.

Expanding your thinking could be the very first step to your own healing process.

Sunila Karan
Counselor,
Stress Management Consultant & Personal Development Trainer



MED-WATCH

- A recent visit to Nadi was an interesting eye opener along Clay Street, supposedly Fiji's version of Harley Street, London. For those of you unfamiliar with the latter suffice it to say all the top notch specialists have their rooms sited in this precinct. A mushrooming of practices has taken place. The signage's are kaleidoscopic and cannot be paralleled, akin to the infamy of the bars and brothels of Saigon in yonder years. Consulting rooms are labeled as shops one and two. All you need are some cartoon characters distributing leaflets with special packages in Clay Street! If we are to compete in this nature then there is need for some professional standards.

- A senior enough general practitioner known to use young apprentices in several practice he runs, was overheard telling a patient that the medication prescribed by another practitioner as material for a rubbish bin. He did not suffer apnea when told that the script originated from his second practice being run by his own locum. Beats me as to the supervision and training provided to the poor juniors.

- A senior general practitioner claiming paternal parentage to the College of General Practitioners will soon need to have DNA typing done on the progeny to prove the point. Unfortunately not a single practitioner carries his genotype. Sorry PAPA, as the saying goes "Only mama knows who planted the seeds."

- Poly-pharmacy at its best originates in the private sector. Ask an ethical pharmacist or better still a pharmacologist why some of our colleagues prescribe up to five items for the common flu? Have we forgotten that there are Common Sense and Non-Pharmacological measures in the treatment armamentarium of a physician?

- A notorious general practitioner in the Suva-Nausori corridor runs a massage palour from his practice premise which advertises "new girls" almost daily. The Fiji Medical Council may consider sending in a Standards team for some ecstatic experience sharing, which can be reported and published.

CME PAGE

This is a forearm Xray of a 14 year old boy who fell from a horse over 3 years ago. He was seen at the Lautoka Hospital and was told that the bones of his right forearm was broken in several places and required surgery to internally fix it and assist with healing.

The internal plates and screws were later removed possibly due to infection. He had since been non-compliant with follow-up as his forearm had been placed in and out of a cast several times.

He presented in May this year complaining of obvious weakness, floppiness and shortening of the right forearm.

Please describe the complication of bone fractures seen in the above Xray that has resulted in the current presentation of this young patient.

You may email your answers to: mariachungharrison@yahoo.com.au

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