Public Private Partnership in Health Care

45th Annual Medical Symposium
30th August - 04th of September 2009

School of Medicine & Health Sciences
Taurama Campus, University of Papua New Guinea
National Capital District
THE MEDICAL SOCIETY OF PAPUA NEW GUINEA

Takes this opportunity to sincerely thank

The Pacific International Hospital, St. Mary’s Hospital, JTA International and UPNG School of Medicine and Health Science for Co-Hosting the 45th Annual Medical Symposium at the School of Medicine & Health Sciences, UPNG, Taurama Campus.

August 30th – September 4th 2009
Public Private Partnership in Health Care

45th Annual Medical Symposium
School of Medicine & Health Sciences,
UPNG, Taurama Campus

August 30th – September 4th 2009
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Proud to Co-Host the 2009 Medical Symposium
JTA International is proud to support the Medical Society of Papua New Guinea’s 45th Medical Symposium and its focus on public private partnerships for health.
Greetings and welcome to you all to our nation’s capital, Port Moresby. The PNG Medical Society presents to you the 45th Annual Medical Symposium. The theme for this year is – “Public Private Partnership in Health Care”. It is an important topic and a first of its kind to be discussed in any symposium. The contrasting photograph on the cover of the Symposium Booklet illustrates the village setting in the foreground against the metropolitan city in the background. What it basically means is that the majority of villages can only access public health services and the cosmopolitan dwellers can afford private health care based on their economic status.

At present there are those minority patients who are well off financially and can afford private health and the majority of patients from the urban and rural areas who can only access the run down aid posts, health centres and public hospitals. There is now a long waiting list for patients to see a doctor in any major hospital due to the lack of manpower resources (doctors and paramedical professions) equipment and drugs. In contrast, there are Private Hospital Institutions that the privileged few can access and afford at any time and there are no long waiting queues.

The ideal scenario would be to have both the public and private health systems to come up with an affordable, easily accessible and working system to compliment each other in the delivery of health care to our people. It is hoped that this will be possible with the outcome resolutions at the end of the Symposium which the government and other stakeholders can adopt and implement in the delivery of healthcare.

I welcome everyone, in particular our keynote speaker and guest speakers from overseas and PNG. You are here not only to impart and share knowledge and ideas with colleagues and fellow participants but also to learn about the cultures and traditions of the diverse ethnic groups in National Capital District. I caution you to be security conscious at all times while going about your business in the city.

I would like to commend and thank the various sponsors for their kind and generous donations towards the successful staging of this year’s Symposium.

To the members of the 2009 Symposium Organizing Committee, thank you for your tireless efforts and commitment in organizing this year’s symposium.

I wish everyone a successful 45th Annual Medical Symposium

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MESSAGE FROM THE CONVENORS

Dear Participants,

It gives us great pleasure in warmly welcoming you all to Port Moresby City, the nation’s capital and host to the 45th Annual Medical Symposium. We also specially welcome our overseas participants who are coming to Papua New Guinea for the first time. For our regular participants from overseas we thank you sincerely for your continuous support in making the medical symposium a truly international event.

This symposium will feature for the first time concurrent scientific sessions and co-chairs on the second and third day of the main program. These concurrent sessions are to accommodate the increasing number of papers that have been submitted and secondly it will hopefully give participants the flexibility to sit in for sessions or papers of their interest.

More than 100 abstracts were received from a wide range of would-be presenters from different medical and non-medical backgrounds. Eighty-five papers have been selected for oral presentation, five to respective specialist sessions and one for poster presentation. The papers to be presented cover a wide range of issues related to the theme of this symposium.

The symposium continues to be the main avenue in which young potential researchers, undergraduate and post-graduate medical and paramedical students present their research work. The society through the annual symposia will continue to encourage training of our future professionals to their fullest potential.

The opportunity has been given to Government Representatives, private sector representatives, NGOs and other international experts to present their plans in line with the theme.

The ultimate success of this year’s theme will be measured by the quality of papers presented, recommendations suggested for possible implementation.

Finally we take this opportunity on behalf of the Organizing Committee and Scientific Committee to wish you well in your stay in the nation’s capital.

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Public Private Partnership in Health Care

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The President of the Medical Society of Papua New Guinea

The Way Forward Through Public Private Partnership in Health Care

Dear Colleagues and friends,

It is my great pleasure to welcome you once again to the 45th Annual Medical Symposium of the Medical Society of Papua New Guinea in the Nations Capital at the School of Medicine and Health Sciences.

A special warm welcome to Prime Minister Grand Chief Sir Michael Somare, Keynote Speaker Honourable Paul Teisen, Minister for National Planning and Rural Development, Health Minister Honourable Sasa Zibe, Governor of NCD Honourable Powes Parkop and 2009 Medical Symposium Patron Dr John Mua.

Welcome to our eminent Guest Speakers from overseas Dr Ian Dickinson, the Vice President of Australasian College of Surgeon, Dr Donald Matheson from World Health Organization, Professor Maxine Wittaker from the University of Queensland, Dr Jane Thomason from JTA International, and Professor John McBride from James Cook University.

A warm welcome also to our local distinguished Guest Speakers; Health Secretary Dr Clement Malau, Secretary National Planning and Rural Development Mr Joseph Lelang, Secretary of Labour and Industrial Relation Department Mr David Tibu, Professor Abdul Mannan Director of Open College from the University of Papua New Guinea, Professor Francis Hombhanja Dean of Health Sciences Divine Word University, Mr Wayne Dorgan from Pacific MMI and Mr Michael Gene Private Consultant on Health Insurance.

And to our highly valued guests and participants from overseas and Papua New Guinea, I warmly welcome you and thank you for your continued presence. There is no doubt, this signifies your interest and commitment to the goals of our Society and welfare of our people.

The Way Forward Towards Public Private Partnership

The provision of public infrastructure and government services to its citizens is one of the prime mandates of governments all over the world. Infrastructure such as roads, electric power, telecommunications, water and sanitation, sea and airport, are fundamental prerequisite for economic growth and development. In addition social and community infrastructure including education and health facilities, public housing and buildings, cultural facilities and environmental infrastructure are essential in modern societies. All across the world in advanced economies and developing countries studies have consistently shown the close relationship between infrastructure and economic output.

There are different ways in which the Government can ensure that necessary public infrastructure and government services can be provided:

Direct provision of infrastructure and services - under this approach, governments assume the financing and delivery risk entirely on the balance sheet of their Treasuries and generally use the capacity of their public service to manage the delivery of such projects.

Privatisation and outsourcing – under this approach governments transfer the financing and delivery risk solely to the private sector under “privatisation” programs whereby capital intensive infrastructure projects such as highways, power generation etc are awarded to the private sector on a long term concession basis.

Competition – under this approach, infrastructure services which may have been delivered exclusively by a public service provider become available for private sectors, where licenses are issued to private companies which can then compete against each other as well as against public service providers. As appropriate it may also apply to new infrastructure across all sectors.

Public Private Partnership (PPPs) – under this approach, government ensures value for money and shares the risks with the private sector in a partnership approach. Risk is transferred to the partner that is best able to manage the risk – generally the private sector bears the financing, delivery and completion risks while the government bears risks associated with service delivery, land acquisition and meeting minimum revenues to ensure the projects remain financially viable.

The theme of this year’s Symposium, “Public Private Partnership in Health Care” is appropriate for deliberation at this time especially when our nation is going through the process of establishing the next ten-year national health plan (2011-2020). The global economic recession has certainly affected PNG. However, the projected economic boom in PNG through the LNG Project should challenge us to establish a road map for PNG’s Health care harnessed from our economic wealth.

Our socioeconomic status had changed significantly in many ways. Most of us are familiar with the impact of these changes on our health as a nation. Our health indices have improved in some areas and slow or not progressed in other areas. We as health professionals must focus our vision, plans and implement innovative ways to address major contributors to our poor health indicators.
We must go back to the basics, rejuvenate rural health outreach, address maternal and child health problems, TB, Malaria and HIV/AIDS. In addition address the national health human resource training, promote measures to reduce non communicable disease such as heart disease, diabetes and malignancies. These issues must be addressed by appropriate local medical research to assist develop strategies to solve these health problems.

The medical symposium resolutions should take into consideration the following concerns:

- The current allocation of 2% GDP should increase to 7-10%.
- Address the worst current health indicators
- Develop new innovate health systems to deliver health care throughout PNG through Public Private Partnership
- Church Health Services, being the major health care provider in the rural PNG, should be supported with more funding
- Recognised NGO health care providers should be assisted by Government to conduct public health programs
- Legislate health insurance
- Development partners’ assistance should be directed to health infrastructure and human resource development

It is mammoth task to host medical symposia that causes stress and insomnia. However, at the end of it all, it develops partnerships at institutional level and develop professional integrity. At this juncture, I take this opportunity on behalf of the Executives and Members of the Medical Society of PNG, to sincerely thank the Chairman of the Symposium Organizing Committee, Colonel (Rtd) Dr Frank Torova and his Organising Committee members, and Scientific Committee Chairman Dr Paul Mondia and their members for bringing to fruition the 45th Annual Medical Symposium. My special sincere thanks and gratitude to Professor Nakapi Tefuaran, Dr Sylvester Lahe, Dr Osborne Liko, Dr Nicholas Mann, Dr Pius Umo and Dr Frank Torova for editing and publishing the 2009 symposium book.

We are deeply indebted to our sponsors for their financial support. I pay tribute and sincerely thank the Pacific International Hospital, JTA International, St Marys Hospital and The School of Medicine and Health Sciences for co-hosting this symposium, and in particular the Chairman of Pacific International Hospital Dr John Mua and the CEO of Pacific International Hospital Dr Amyna Sultan

The Society acknowledged the support of our numerous supporters, corporate and individuals, without which it would be impossible to have this symposium taking place and especially in the way it is today. The Society will officially acknowledge our sponsors during the Society Dinner.

I particularly thank Vice President Dr Nicholas Mann, Secretary Dr Sylvester Lahe, Treasurer Dr Harry Ageeleg, and Executive Member Dr Osborne Liko for their undivided commitment and dedication to the activities of the Medical Society throughout the year. Your support continues to be my motivation to progress the Medical Society forward in our changing global village for a better and brighter future. The engine room of the Society has always been operated by a team of administrative volunteers that we are so indebted to, including, Mrs Rose Solien, Mr Brian Tobia, Mr Pedro Kamong, Mr Arno Leka, Mr Darius Degaru, Ms Joyce Ila, Ms Kimberly Kawapuro and Mr Pradeep Rathnagiri. We sincerely thank you all.

I sincerely hope that you find the medical symposium highly informative, challenging and stimulating, while contributing meaningfully in a way that will enrich our efforts in making our country progress in health management, clinical care, health training and medical research to improve health care delivery.

Friends and Colleagues, you are invited to enjoy the social events that have been carefully arranged and form part of the symposium. The Nations Capital has a lot to offer for tourists so please make the best of the opportunity.

Thank you all and wishing you a successful 45th Annual Medical Symposium in the Nations Capital, Port Moresby.

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It gives me great pride and honour as the Governor of the National Capital District and the host city Port Moresby to warmly welcome keynote speaker, guest speakers and all participants.

The National Capital District as the gateway to Papua New Guinea continues to receive tourists. As such, the beautification program by the National Capital District Commission and the Happy Gardener has been in full swing to give that confident touch and sense to tourists both locally and internationally of what our city can offer.

The local tourism sites around the Capital City have more to offer for our overseas guests. Please take time off to see the various sculptures at Erima, 5 Mile, Gordon and Konedobu in the evenings to reveal some of the country’s rare flora and fauna in spectacular night light. The Recreation Park in Gerehu and the Sport facilities, Beach Pathways lights and the Era Kone Amphi theatre at Ela Beach, Down Town is part of the National Capital District’s ongoing commitment to restore confidence in the Port Moresby night life for family, social and religious activities.

Since the first Symposium, the city of Port Moresby has hosted 16 Symposia and this year would be the 17th. I have confidence in the Medical Society of PNG and the 2009 Medical Symposium Organizing Committee to bring to you another successful symposium.

I am particularly interested in the theme of “Public Private Partnership in Health Care”. This city has both public and private health care facilities and therefore I am keen to receive the resolutions of this symposium to assist the future of health care services in the city.

Once again, on behalf of my government and the people of the National Capital District I welcome you all to our city.

Have a safe and happy 45th Medical Symposium!
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WELCOME MESSAGE FROM THE MEDICAL SYMPOSIUM PATRON

I welcome you all to the 45th Annual Medical Symposium in the Nation’s Capital, Port Moresby.

In particular I welcome our Keynote Speaker, Guest Speakers and participants from overseas. Your presence no doubt is a manifestation of your interest and commitment to addressing our nation’s health issues and welfare of our people.

It is a colossal task to host medical symposia that requires commitment and dedication to make this happen. I am proud as Patron to be associated with the medical fraternity this year to host the 2009 medical symposium. I congratulate and thank the Port Moresby Team led by Dr Frank Torova and Dr Paul Mondia for their commitment and dedication to host the 2009 medical symposium. I sincerely thank the Co-Host team from Pacific International Hospital, St Marys Hospital, JTA International and UPNG School of Medicine and Health Sciences for accepting the challenge to host the medical symposium.

Papua New Guinea health care is at the crossroad facing significant challenges to deliver health care to its citizens. Many of these challenges are well-known to the medical fraternity in Papua New Guinea. I believe that this Medical Symposium will provide that opportunity to the medical fraternity in Papua New Guinea to find a way forward in solving our health challenges through Public Private Partnership in Health Care delivery.

Please enjoy the social events and cultural events organised by the Symposium Committee.

I wish you all a successful 45th medical symposium and a pleasant stay in the National Capital District.

Tenkiu tru
Experts agree that effective hand washing is one of the most important steps to keep yourself and your family healthy.

To protect yourself from catching swine flu, take the same steps you would to prevent getting any cold or flu. Flu viruses are spread mainly from person to person through coughing or sneezing. Sometimes people may become infected by touching something with flu viruses on it and then touching their mouth, nose or eyes.

It is recommended that you wash your hands regularly with soap and water.
Colleagues and participants of the 45th Medical Symposium of the Medical Society of Papua New Guinea.

As Secretary for health my challenges to all of us is the level of commitment we all have for the health and well being of all Papua New Guineans. We have had important topics discussed in past medical symposiums and it is time we ask ourselves as to how these meetings have made a difference to the health status of our people.

Our health systems are broken, and our health indicators are rated as the worst in the region. There are multiple reasons for this which need not be discussed but it is time for us all to move on and correct the situation by creating new ways of doing business in the health sector.

I congratulate the President and the Medical Society for choosing “Public Private Partnership in Health Care” as the theme for this year’s symposium. This is well in line with the National Departments commitment to lead the process of innovation and transformation. The Department expects the Medical Society, Union Groups and experts in the various fields of medicine to be active in providing evidence based advice to the Department so that it can set the right policies, standards and guidelines for the health system in the country.

Our current National Health Plan finishes in 2010 and the department has now commenced work on the new plan 2011 - 2020. In our recent National Health Conference we agreed with the provinces to implement a single national health plan which will be in tune with the 2050 vision of the Government. The conference also agreed to endorse four focus areas for public consultation which include;

1) Improve service delivery,
2) Address priority health diseases,
3) Address priority health programs, and
4) Strengthen health system

The new executive management team has decided that we must focus on innovation and transformation in order to make a difference for the sake of our people. We collectively have refused to allow our health indicators to stay the same or deteriorate, and have committed our selves to supporting the provinces and districts to understand our weaknesses and to do things differently in the future.

By the time the symposium has commences the National Department of Health would have conducted a forum with all our large resource developers and commercial companies. The Department intends to brief our potential partners of the new national health plan and have dialogue with the important private partners and develop a road map on how we can collaborate in addressing many of our health problems.

The National Department of Health is committed to primary health care, service delivery to the rural majority and the urban poor through innovation and transformation.

I commend the Medical Society for the selection of the theme. Welcome those of you who have come from abroad and wish all the members of the Society a successful symposium. I look forward to outcomes that will shape the way the department will develop its policies for fruitful Public Private Partnerships Health Care into the future.

Thank you and God Bless
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Editor

Dr Pius Umo
MBBS, MMED (Radiology)
Editor

Dear Friends and Colleges,

On behalf of the Editorial Committee, we are proud to bring you the Scientific proceedings of the 45th Annual Medical symposium. You are invited to fully participate in this premier scientific event on our 2009 medical calendar.

Our gratitude is extended to our keynote speaker, guest speakers and presenters from overseas and PNG.

This year’s theme on Public Private Partnership in Healthcare is most timely and very important in the context of the PNG Government’s Vision for the delivery of social services to attain targeted national development goals. Submitted papers have been carefully considered and selected to stimulate effective and constructive discussions.
Most importantly the committee would like to see resolutions that will underpin a practical and realistic road map that are effective, affordable and accessible to the majority of our people.

We acknowledge and commend the high caliber research, especially undertaken by our undergraduate and postgraduate students as reflected by the quality papers on infectious diseases and other medical conditions that contribute to the unacceptable morbidity and mortality rates in the country. We encourage local researchers to publish their work in our international peer reviewed PNG Medical journal.

The editors take this opportunity to sincerely thank the Scientific Committee, the advisors of the Medical Society and the Secretarial staff for their tireless efforts and assistance in publishing the 45th Annual Medical Symposium booklet.

We thank the members of the Medical Society for giving us the opportunity to prepare this booklet.

We sincerely hope you enjoy this symposium.
ACKNOWLEDGEMENT

We are grateful to the Government of Australia through AusAID for funding the publication of the PNG Medical Journal

The Editors

PAPUA NEW GUINEA MEDICAL JOURNAL

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The Executive Officer, UPNG School of Medicine and Health Sciences, P.O. Box 5623, Boroko, NCD
Phone: (675) 3112626 Fax: (675) 3250809

Proud Co-Host of the 45th Medical Symposium
PROGRAM HIGHLIGHTS FOR THE SYMPOSIUM WEEK

- Saturday 29th  Arrival of Members, Guest and Participants
- Sunday 30th  Registration from 9AM to 5PM, SMHS, Admin. Building
- Monday 31st  Main Symposium, School of Medicine & Health Sciences
- Tuesday 01st  Main Symposium, School of Medicine & Health Sciences
- Wednesday 02nd  Main Symposium, School of Medicine & Health Sciences
- Thursday 03rd  Special Meetings, School of Medicine & Health Sciences and PMGH
- Friday 04th  Special Meetings, School of Medicine & Health Sciences and PMGH

SOCIAL ACTIVITIES

All evening activities commence at 6PM

- Sunday 30th  Registration Cocktail at Airways Hotel (Poolside)
- Monday 31st  NCD Governor Dinner at Grand Palace Restaurant
- Tuesday 01st  Medical Society Dinner at Holiday Inn
- Wednesday 02nd  Cultural Night Dinner at School of Medicine & Health Sciences
- Thursday 03rd  Christian Doctors Association Breakfast – Palazzo, Lamana Hotel
- Thursday 03rd  Specialty Dinners (Respective Specialty Venues)
- Friday 04th  National Doctors Association Dinner Dance – Airways Hotel

OVERSEAS VISITORS TOUR

- Wednesday 02nd  Flight Tour of the Famous Kokoda Track
- Wednesday 02nd  Harbor Cruise of Fairfax Harbor, Port Moresby
- Wednesday 02nd  Visit to the Art Centre, Botanical Garden and Parliament House
A person with AIDS is just like You and Me

That's because AIDS can happen to anyone. It doesn't discriminate by age, gender, cultural background, social status or religion. We should all provide care and support for people living with the AIDS virus to ensure that they can continue to live productively for many years to come.

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Supported by the Australian Government

F-stack Aids Council

For further information about AIDS in your community contact:

Don't have sex, be faithful or always use a condom
Public Private Partnership in Health Care

MEDICAL SOCIETY OF PNG NATIONAL EXECUTIVES 2009

THE NATIONAL EXECUTIVE

Dr Mathias Sapuri  - President
Dr Nicholas Mann  - Vice President
Dr Sylvester Lahe  - Secretary
Dr Harry Aigeeleng  - Treasurer
Dr Osborne Liko  - Executive Member

EXECUTIVE ADVISORS

Prof John Vince  - Prof Bediako Amoa
Prof Peter Siba  - Prof Nakapi Tefuarani
Prof Francis Hombhanje  - Prof Sir Isi Kevau
Dr Adolf Saweri  - Dr John Millan
Dr Victor Golpak  - Prof Michael Alpers

45th MEDICAL SOCIETY SYMPOSIUM ORGANIZING COMMITTEE

Chairman  - Colonel (Rtd) Dr Frank Torova
Deputy Chairperson  - Dr Amyna Sultan
Secretary  - Dr Onne Rageau
Treasurer  - Dr Duncan Dobunaba

Sub Committee Chairs
Scientific  - Dr Paul Mondia
Fundraising  - Dr Fred Kambual
Social Events  - Dr Caspar Conny
Transport  - Dr Thomas Kubu
Accommodation  - Dr James Maibon

MEDICAL SYMPOSIUM JUDGING PANEL

Chairman  - Prof Michael Alpers
Members  - Prof Nakapi Tefuarani  - Prof John Vince  - Dr Sylvester Lahe
          - Prof Deborah Lehmann  - Dr Adolf Saweri
The World Health Organization in Papua New Guinea extends a warm welcome to all delegates of the 2009 Papua New Guinea Medical Symposium

The Role of WHO in Papua New Guinea is to promote and strengthen actions to attain the highest possible level of health for all in Papua New Guinea. This is achieved through:

- Working closely with the Government and its external partners in addressing major health issues and challenges in PNG.
- Supporting the National Department of Health in strengthening health services, in particular through technical support and the building of national capacity.
- Promoting the use of evidence, research and best international practices for setting priorities, defining strategies and measuring results.
- Enhancing health security through support for tackling of emerging diseases and early detection and response to disease outbreaks and disasters.

Dr Eigil Sorensen
Representative
World Health Organization
Level 4, Aopi Center, Waigani
P.O. Box 5896, Boroko, NCD
Ph: (675) 325-7827
Fax: (675) 325-0568
Email: wr@png.wpro.who.int
LIFE MEMBERS OF THE MEDICAL SOCIETY OF PNG

Dr Adolf Saweri, MBE  
2002

Prof Michael Alpers, CSM, AO  
2002

Dr. Sir Puka Temu, CMG, KBE, Deputy PM of Papua New Guinea  
2002

Dr Chris Marjen, MBE  
2003

Late Dr Jan Saave, MBE  
2003

Late Dr Morris Wainetti, OL  
2004

Professor Ian Riley  
2004

Professor Joseph Igo  
2004

Dr Sir Rueben Taureka, KBE, CBE  
2005

Professor Ian Maddocks  
2005

Dr Roy Scragg  
2005

Dr David Hamilton  
2005

Dr Amelia Homba  
2006

Dr Neil Muirden  
2006

Dr John Muirden  
2006

Dr Albert Foreman  
2007

Professor Deborah Lehmann  
2007

Professor John Vince  
2008

Dr Joseph Kaven, CBE  
2008
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## PAST SYMPOSIA OF THE MEDICAL SOCIETY OF PAPUA NEW GUINEA

<table>
<thead>
<tr>
<th>Year</th>
<th>Topic</th>
<th>Location</th>
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<tbody>
<tr>
<td>1965</td>
<td>Pigbel</td>
<td>Goroka</td>
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<tr>
<td>1966</td>
<td>General Topics</td>
<td>Mt Hagen</td>
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<tr>
<td>1967</td>
<td>Obstetrics</td>
<td>Madang</td>
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<td>1968</td>
<td>Paediatrics</td>
<td>Lae</td>
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<td>1969</td>
<td>Health in the Village</td>
<td>Port Moresby</td>
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<td>1970</td>
<td>General Topics</td>
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<td>1971</td>
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<tr>
<td>1972</td>
<td>National Health Plan</td>
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<td>1973</td>
<td>Family Health</td>
<td>Port Moresby</td>
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<tr>
<td>1974</td>
<td>Medical Education and Research in PNG</td>
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<td>1975</td>
<td>Occupational Health</td>
<td>Port Moresby</td>
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<tr>
<td>1976</td>
<td>Health Care in PNG: Present State and Future Direction</td>
<td>Lae</td>
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<tr>
<td>1977</td>
<td>Continuing Medical Education</td>
<td>Port Moresby</td>
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<tr>
<td>1978</td>
<td>The Common Ground in Medicine and Surgery</td>
<td>Port Moresby</td>
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<td>1979</td>
<td>Accidents</td>
<td>Goroka</td>
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<tr>
<td>1980</td>
<td>Antibiotics/Post Graduate Training in PNG</td>
<td>Madang</td>
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<tr>
<td>1981</td>
<td>Chronic Illnesses and Disability</td>
<td>Rabaul</td>
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<td>1982</td>
<td>Addictions in PNG</td>
<td>Port Moresby</td>
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<td>1983</td>
<td>Immunology</td>
<td>Lae</td>
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<td>1984</td>
<td>Infectious Diseases</td>
<td>Goroka</td>
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<td>1985</td>
<td>Role of High-Tech in PNG Medicine</td>
<td>Arawa</td>
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<td>1986</td>
<td>Peace in PNG/10 years on – Where are we?</td>
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<td>1987</td>
<td>Rural Health Services</td>
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<td>1988</td>
<td>Epidemics and Disaster Medicine</td>
<td>Lae</td>
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<td>1989</td>
<td>Towards the Year 2000</td>
<td>Port Moresby</td>
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<td>1990</td>
<td>Community Health</td>
<td>Goroka</td>
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<td>1991</td>
<td>Maternal and Child Health/Pain Relief in Cancer</td>
<td>Port Moresby</td>
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<td>1992</td>
<td>Non-Communicable Diseases</td>
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<td>1993</td>
<td>Malaria</td>
<td>Port Moresby</td>
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<td>1994</td>
<td>Typhoid and Tuberculosis</td>
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<td>1995</td>
<td>STD/HIV in PNG</td>
<td>Port Moresby</td>
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<td>1996</td>
<td>Rural Health and Continuing Medical Education</td>
<td>Madang</td>
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<td>1997</td>
<td>Changing Patterns of Diseases in PNG</td>
<td>Goroka</td>
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<td>1999</td>
<td>Disaster Medicine and Environmental Health</td>
<td>Rabaul</td>
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<td>2000</td>
<td>Emerging and re-emerging Diseases in the New Millenium</td>
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<td>2001</td>
<td>Cancer in Papua New Guinea</td>
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<td>2002</td>
<td>Mental Health &amp; Substance Abuse</td>
<td>Arotau</td>
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<td>2003</td>
<td>HIV/AIDS Epidemic in Papua New Guinea</td>
<td>Mt Hagen</td>
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<td>2004</td>
<td>Medical &amp; Health Education</td>
<td>Port Moresby</td>
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<tr>
<td>2005</td>
<td>Medical Research – A Tool for Health Care Delivery</td>
<td>Goroka</td>
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<tr>
<td>2006</td>
<td>Trauma, Emergency Medicine, Occupational Health and Rehabilitation</td>
<td>Madang</td>
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<td>2007</td>
<td>Oral Health, Head and Neck Diseases</td>
<td>Port Moresby</td>
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<tr>
<td>2008</td>
<td>Strategic Health Planning</td>
<td>Rabaul</td>
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SMALL INCISION CATARACT SURGERY IS HERE AT PIH!

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Public Private Partnership in Health Care

SCIENTIFIC PROGRAM
THME: PUBLIC PRIVATE PARTNERSHIP IN HEALTH CARE
VENUE: SCHOOL OF MEDICINE AND HEALTH SCIENCES, UPNG TAURAMA CAMPUS

SUNDAY 30TH AUGUST 2009

09:00 – 17:00 Registration: UPNG School of Medicine and Health Sciences
19:00 – 22:00 Cocktail Reception: Airways Hotel Poolside – Welcome by Honorable Powes Parkop, Governor for National Capital District and Colonel (Rtd) Dr Frank Torova, Chairman of the Symposium Organising Committee
Traditional Welcome by Central Province Children Dancers from Kelerakwa, Bougainville Bamboo Band and Flower Girls from Pacific International Hospital

MONDAY 31ST AUGUST 2009 VENUE: SMHS, NLT 1 (EU Building)

07:45 – 08:00 Medical Society Ceremonial Procession, Colonel (Rtd) Jethro Usurup & Central Province Children Dancers from Kelerakwa

Master of Ceremony Dr Onne Rageau Convenes Meeting

08:05 – 08:10 Opening Prayer – Retired Bishop Sir Brian Barnes, GCMG, GCL
08:10 – 08:20 Introductory Remarks by Chairman of Organizing Committee – Colonel (Rtd) Dr Frank Torova
08:20 – 08:30 Welcome by President of Medical Society of PNG – Dr Mathias Sapuri, OL
08:30 – 08:40 Speech by the Patron of 45th Medical Symposium – Dr John Mua, PhD
08:40 – 08:55 Address by Honourable Sasa Zibe, MP – Minister for Health and HIV/AIDS
08:55 – 09:10 Official Opening by Prime Minister Grand Chief Sir Michael Somare, GCL, GCMG, CH CF, KStJ

Session One: The National Vision for Public Private Partnership
Chairman: President Dr Mathias Sapuri, OL Co-Chairman: Dr Adolf Saweri, MBE

09:10 – 09:55 Keynote Speaker: Honorable Paul Tiensten, MP - Minister for National Planning and Rural Development.
09:55 – 10:25 Guest Speaker: Mr Joseph Lelang, Secretary for National Planning and Rural Development
PNG Government Policy on Public Private Partnership

10:25 – 10:35 NESCAFE MORNING BREAK

Session Two: Health Care in Public Private Partnership
Chairman: Dr Paul Mondia Co-Chairman: Dr Eigil Sorenson

10:35 – 11:05 Guest Speaker: Dr Clement Malau, Secretary NDOH
National Department of Health Plan for Public Private Partnership in Health Care
11:05 – 11:35 Guest Speaker: Mr David Tibu, Secretary for Labour and Industry Relations
Proposed Compulsory Healthcare Systems for Workers in Papua New Guinea
11:35 – 12:05 Guest Speaker – Dr Ian Dickinson, Vice President, Royal Australasian College of Surgeon
Public Private Partnership in Surgical Care

12:05 – 13:00 LUNCH

Session Three: Organisations and Programs in Health Care Delivery
Chairman: Dr Clement Malau, Secretary NDOH Co-Chairperson: Dr Jane Thomason

13:00 – 13:30 Guest Speaker: Dr Donald Matheson, World Health Organization Consultant
Partnership Approach in Health
13:30 – 14:00 Guest Speaker: Professor Maxine Whittaker, University of Queensland
Regional Perspective on Public Private Partnership
14:00 – 14:15 Ukin R: Impact of Collaboration through Public-Private Partnership by Ok Tedi Mining Ltd in implementing the National HIV/AIDS Response in the North Fly of Papua New Guinea
14:15 – 14:30 Garap J: PNG Eye Care: Establishing refractive error services through partnerships
14:30 – 14:45 Tefuarani N: Operation Open Heart Program: A Public Private Partnership Success Story
14:45 – 15:00 Kewa K: Partnering for health services in the North Fly health development program
15:00 – 15:15 Lusem F: The Millenium Healthy Village – the solution to the common public health programs affecting PNG
15:15 – 15:30 NESCAFE AFTERNOON BREAK

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### Session Four: Health Insurance, Finance and Communication in Health Care Delivery

**Chairman:** Dr Nicholas Mann, CMS  
**Co-Chairperson:** Dr Amyna Sultan

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</table>
| 15:30 – 16:00 | Guest Speaker: Mr Wayne Dorgan, Managing Director Pacific MMI  
Current Health Insurance in Papua New Guinea |
| 16:00 – 16:30 | Guest Speaker: Mr Michael Gene, Health Insurance Consultant  
A Proposed Health Insurance Model for Papua New Guinea 0 |
| 16:30 – 16:45 | Rageau O: How could we provide medical insurance cover to the rural majority and urban poor in Papua New Guinea |
| 16:45 – 17:00 | Worth H Negin J: HIV financing and its effectiveness in PNG |
| 17:00 – 17:15 | Kim J: The common denominator between ICT/Telecommunication and Health Care in Papua New Guinea. |
| 17:15 – 17:30 | Son J: Health Care and Information Technology Convergence |
| 17:30 – 18:00 | Resolution Session  
Chairperson: Professor Maxine Whittaker |
| 19:00 – 22:00 | NCD Governor Honorable Powes Parkop Welcome Dinner  
Venue: Grand Palace Restaurant  
Entertainment by Manus Dancers |

**TUESDAY 1st SEPTEMBER 2009  
VENUE: SMHS, NLT1 (EU Building)**

### Session One: Partnership in Health Care, Education and Training

**Chairman:** Professor Sir Isi Kevau, KBE, CBE  
**Co-Chairman:** Professor John Vince

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 08:00 – 08:30 | Guest Speaker: Professor Abdul Mannan, UPNG, Director Open College  
Public Private Partnership in delivering University education through the distance mode |
| 08:30 – 08:45 | Garbett I K: The International Public Private partnership initiative of the Division of Pathology, SMHS: Two working models |
| 08:45 – 09:00 | Madhu J: Public Private partnerships in the development of breast cancer support work at PMGH |
| 09:00 – 09:15 | Usurup J: The Lihir Island Community Health Program: A mine-effected community initiative for social self-reliance, founded on public private partnership |
| 09:15 – 09:30 | Tumbi D: CDI Public Health Program Progress and Impact in the Project Impact Areas of Gulf & Southern Highlands Provinces |
| 09:30 – 09:45 | Garbett IK: The collaborative telepathology network project (CTNP): A public-private development for capacity building of pathology services in PNG |
| 09:45 – 10:00 | Watson A: Medical Equipment maintenance in PNG – A case for Public-Private Partnership |
| 10:00 – 10:15 | NESCAFE MORNING BREAK |

### Session Two: Malaria

**Chairman:** Professor Michael Alpers, CSM, AO  
**Co-Chairman:** Dr Ivor Mueller

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:45 – 11:00</td>
<td>Hertzel M W: County-wide prevalence of Malaria-implications for malaria control interventions</td>
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<tr>
<td>11:00 – 11:15</td>
<td>Henry-Haldin C N: Biological diversity and gene polymorphisms associated with knockdown resistance in members of PNG anopheles punctulatus species complex</td>
</tr>
<tr>
<td>11:15 – 11:30</td>
<td>Barnabas C: A new essay for simultaneous detection of mutations associated with plasmodium vivax drug resistance</td>
</tr>
<tr>
<td>11:30 – 11:45</td>
<td>Hertzel M W: Evaluation of malaria control interventions and operational research for malaria control under the global fund malaria grant.</td>
</tr>
</tbody>
</table>
| 11:45 – 12:00 | Launch of the Medical Imaging Society of Papua New Guinea – Minister for Health and HIV/AIDS Honorable Sasa Zibe, MP  
Facilitators: Dr Pius Umo and Dr Dorah Lenturut |
| 12:00 – 13:00 | LUNCH |
### Concurrent Session Three (Venue: NLT1 EU Building): Malaria, Dengue, Filariasis and Helminths
Chairman: Professor Francis Hombhanje  
Co-Chairman: Professor John Reeder

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<th>Time</th>
<th>Title</th>
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<tbody>
<tr>
<td>13:00 –13:15</td>
<td>David M: Plasmodium vivax long term in vitro culture attempts: Enriching reticulocytes for P. vivax cell cultures-the good the bad and the costly</td>
</tr>
<tr>
<td>13:15 –13:30</td>
<td>Fitzpatrick J: Exploring the dynamics of global funding initiative to distribute WHO approved ITN’s in PNG.</td>
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<tr>
<td>13:30 –13:45</td>
<td>Manning LA: Severe childhood malaria in PNG</td>
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<td>13:45 –14:00</td>
<td>Rarau P: Intermittent preventative treatment of malaria and anaemia (IPTi) in PNG infants-An update of clinical epidemiology</td>
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<tr>
<td>14:00 –14:15</td>
<td>Tavul L: The effect of alcohol of on P. falciparum malaria growth: “does it matter?”</td>
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<tr>
<td>14:15 –14:30</td>
<td>Senn N: Contribution of Dengue fever to the burden of acute febrile illnesses in Papua New Guinea: a prospective age specific study</td>
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<tr>
<td>14:30 –14:45</td>
<td>Siba V: The Evaluation of Typhoid Fever Diagnostic Systems for Use in Papua New Guinea</td>
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<tr>
<td>14:45 –15:00</td>
<td>Tisch D: Transmission intensity and biomarkers of Wuchereria bancrofti infection 10 years after cessation of mass drug administration to eliminate lymphatic filariasis in Papua New Guinea</td>
</tr>
<tr>
<td>15:00–15:15</td>
<td>Michael A: Intestinal parasites in pregnant women in Goroka, EHP – Results from the Neonatal Immunity Development</td>
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</table>

### Concurrent Session Four (Venue: OLT BMS Building): Surgical Issues
Chairman: Colonel (Rtd) Dr Frank Torova  
Co-Chairman: Dr Osborne Liko

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<tr>
<th>Time</th>
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</table>
| 13:00 –13:30 | Guest Speaker: Dr Ian Dickinson  
Current Developments in Bone Malignancies |
| 13:30 –13:45 | Kuzma J: Tertiary specialized care in PNG: obstructed or improved by partial privatization |
| 13:45 –14:00 | Mulu J: Pharmaceutical cost evaluation of managing trauma patients |
| 14:00 –14:15 | Kelly A: Meanings of circumcision amongst non-traditionally circumcised men in PNG |
| 14:15 –14:30 | Aeno H: More than just a cut: Penile Practices in PNG |
| 14:30 –14:45 | Kelly A: Pleasure or pain: Penile inserts amongst men in PNG |
| 14:45 –15:00 | Kuzma J: Diabetic foot ulcer PMGH 2003-2008 |
| 15:00 –15:15 | Umo P: Preliminary findings of mammographic breast examinations at Pacific International Hospital |
| 15:15 –15:30 | NESCAFE AFTERNOON BREAK |

### Medical Society of PNG (AGM) 45th Annual General Meeting
Venue: SMHS, NLT 2 (Administration Building)

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<tr>
<th>Time</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:30 –18:00</td>
<td>45th Annual Medical Symposium Technical Advisors and Rapporteurs : Final Resolutions for actioning –</td>
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<td></td>
<td>• Dr Paison Dakulala, MBE  Deputy Secretary for Health</td>
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<td>• Professor Maxine Whittaker, University of Queensland</td>
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<td>• Dr Andre Reiffer, World Health Organization</td>
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<td>• Mr Geoff Clark, World Health Organization</td>
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<td>• Mr Enoch Posanai, Director Family Health Services</td>
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<td>Chairperson: Professor Maxine Whittaker, Resolution Session</td>
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<td>19:00 –22:00</td>
<td>Medical Society Dinner: Guest Speaker – Honourable Dr Sir Puka Temu, CMG, KBE, Deputy Prime Minister</td>
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<td>Venue: Holiday Inn</td>
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<td>Medical Society Life Membership Award</td>
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<td>Entertainment: Traditional Dancers</td>
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Public Private Partnership in Health Care

WEDNESDAY 02nd AUGUST 2009  VENUE: SMHS, NLT1 (EU Building)

Session One: HIV & AIDS
Chairman: Dr Sylvester Lahe  Co-Chairman: Dr John Millan

08:00 –08:30 Guest Speaker: Professor John McBride
08:30 –08:45 Prombuth T: Improving access to care & treatment through continuum of prevention to care & treatment in NCD
08:45 –09:00 John B: Validation of the Roche Amplicor HIV – 1 DNA test for early detection HIV in infants born to HIV seropositive women in the EHP & NCD
09:00 –09:15 Kupul M: Women’s views on circumcision as an HIV preventative strategy in PNG
09:15 –09:30 McCarthy M: HIV and the family in Port Moresby
09:30 –09:45 Kelly A: Sex, condom use and HIV disclosure: people living with HIV on treatment with a regular partner
09:45 –10:00 Koimbu T: Working partnership to improve health services in Kainantu District: Experiences of the HIV/AIDS prevention in rural enclaves project
10:00 –10:15 NESCAFE MORNING BREAK

Session Two: Undergraduate and Postgraduate Student Research Papers
Chairman: Professor Nakapi Tefuarani  Co-Chairman: Professor Bediako Amoa

10:15 –10:25 Anga G: The aetiology of febrile encephalopathy in children admitted to PMGH
10:35 –10:45 Laman M : Is routine lumbar puncture indicated in PNG children following simple febrile seizures
10:45 –10:55 Harino P: Clinical algorithm for predicting TB treatment outcome in adult PTB patients at Modilon General Hospital, Madang, PNG
11:05 –11:15 Olali P: A prospective analysis of a PNG BCR-ABL 1 positive chronic myeloid leukaemia cohort within the GIPAP
11:15 –11:25 Mel A: Assessment of pfcrt-mediated chloroquine resistance to P.falciparum malaria at Malalaua station (Kerema district, Gulf Province, PNG)
11:25 –11:35 Karao B: Effectiveness of Tuberculosis treatment at Moreguina Health Center
11:35 –11:45 Kingston K: The Moreguina Experience : What can we learn
11:45 –11:55 Mara S: The reliability of immunization coverage recording and reporting for children less than 1 year from 2004 – 2008 for Moreguina Subdistrict, Abau, CP
11:55 –12:05 Gawi J: Alcohol related violence in Moreguina, Central Province, PNG
12:05 –12:15 Komasi P : Multimedia medical education in pathology
12:15 – 12:25 Paiva O: The New small-eyed snake (Micropechis ikaheka): a case study in how basic research into venom composition improves our understanding of clinical syndromes of evenoming, and provides insights into antivenom suitability.

12:25 – 12:30 STUDENTS QUESTION AND ANSWER SESSION

Launch of the Remote and Rural Medicine Society of Papua New Guinea – Dr Clement Malau, Secretary of Health
Facilitators: Professor John Vince and Colonel (Rtd) Dr Jethro Usurup

12:30–13:30 LUNCH

Abstain, Be faithful or always use a Condom
### Concurrent Sessions (Venue: NLT1 EU Building): Research into Infectious Diseases

**Chairman: Professor Peter Siba**  
**Co-Chairman: Professor Trevor Duke**

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<th>Session</th>
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<tr>
<td>13:30 –13:45</td>
<td>Luang-Suarkia, D: Preliminary Findings of Influenza viral activity in Papua New Guinea</td>
</tr>
<tr>
<td>13:45 –14:00</td>
<td>Laing I: Genetic Variations in innate and adaptive immune genes affect the age of the first acute lower respiratory infection (ALRI) and the number of ALRI’s in the First 18 months of life in children from the highlands of Papua New Guinea</td>
</tr>
<tr>
<td>14:00 –14:15</td>
<td>Semos I: Caregiver practices and their protective associations to stunting in children under 5 in Eastern Highlands (EHP) and Madang Provinces, Papua New Guinea</td>
</tr>
<tr>
<td>14:15 –14:30</td>
<td>Francis JP: Maternally derived IgG responses to pneumolysin and pneumococcal surface protein A have inverse effects on risk for early upper respiratory tract pneumococcal carriage in high risk infants in Papua New Guinea</td>
</tr>
<tr>
<td>14:30 –14:45</td>
<td>Luang-Suarkia D: High Rate of Rotavirus Diarrhoea among Children at Goroka General Hospital Paediatric Ward – WHO surveillance: a report to the NDoH</td>
</tr>
<tr>
<td>14:45 –15:00</td>
<td>Kirarock W: High exposure to indoor air pollutants in traditional households in highlands of Papua New Guinea</td>
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<td>15:00 –15:15</td>
<td>Lai M: Immunogenicity of pneumococcal polysaccharide vaccine (PPV) in infants primed with pneumococcal conjugate vaccine (PCV) in Papua New Guinea</td>
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<tr>
<td>15:15 –15:30</td>
<td>Opa CA: Survey of non communicable diseases: Lung health and obesity in the highlands of PNG</td>
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<td>15:30 –15:45</td>
<td>Amaki I: Medical and psychosocial care to survivors of Domestic and Sexual violence in Lae</td>
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<td>15:45 – 16:00</td>
<td>NECAFE AFTERNOON BREAK</td>
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**Proud Sponsor of the 2009 Symposium Satchels**

EBOS HEALTH & SCIENCE (PNG) LTD
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<tr>
<td>13:30</td>
<td>Witne B: Pari Village NCD Hospital Records at Port Moresby General Hospital: A Comparison of Earlier and Recent Decades</td>
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<td>13:45</td>
<td>William D: The Successful Development of a new equine whole IgG monovalent antivenom for use in the treatment of bites by the Papua taipan (Oxyuranus scutellatus)</td>
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<td>14:00</td>
<td>Weir J: SIL and Health Care in PNG</td>
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<td>14:30</td>
<td>Menzies J: Telemedicine services – a useful diagnostic modality for PNG</td>
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<td>14:45</td>
<td>Rai P: Integration of Traditional Medicine into PNG National Health System-The journey so far</td>
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<td>15:00</td>
<td>Riparip J: Tapping into a Goldmine of Human Resource for Sexual and Reproductive Health</td>
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<td>15:15</td>
<td>Winnington A: The impact of small arms violence in Bougainville during and after conflict and disarmament</td>
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<td>15:30</td>
<td>Jenson S: The Latest, Evidence-based Adult and Paediatric Snakebite Management Guidelines for PNG</td>
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<td>NESCAFE AFTERNOON BREAK</td>
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<td>14:00</td>
<td>Overseas Visitors Tours.</td>
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<td>15:00</td>
<td>NATIONAL DOCTORS ASSOCIATION (NDA) GENERAL MEETING (AGM) – SMHS NLT 2 (Administration Building)</td>
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<td>19:00</td>
<td>Cultural Night Dinner (SMHS)</td>
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**Tour One:** Flight tour of the famous Kokoda Track  
**Tour Two:** Port Moresby Fairfax Harbour Cruise with PNGDF

**Guest Speaker:** Honorable Sasa Zibe, MP Minister for Health and HIV/AIDS  
**Venue:** SMHS, School Administration Triangle  
**Presentation of Corporate Sponsors Awards**  
**President's Award for the Best Symposium Paper**  
**Deborah Lehmann Award for the Best Research Paper Leading to Implementation**  
**Dean's Award for the Best Students Research Paper**  
**Announcement of Student Scholarship**  
**Entertainment:** Traditional Dancing  
Kelerakwa Children Traditional Dancers  
North Solomon Dancers  
Manus Dancers  
Milne Bay Dancers  
Pomio Dancers

**Formal Handover Ceremony:** Pacific International Hospital team Colonel (Rtd) Dr Frank Torova – Chairman & Dr Paul Mondia – Scientific Committee Chairman to Lae Angau Memorial Hospital 2010 Organizing Committee Chairman Dr Polapoi Chalau (CEO Angau Memorial Hospital)
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<td>06:30–08:00</td>
<td>Christian Doctors Association Breakfast Meeting</td>
<td>Lamana Hotel</td>
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<td>08:00–16:00</td>
<td>SPECIALTY MEETINGS</td>
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<td>Obstetrics &amp; Gynaecology</td>
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<td>Medical Imaging</td>
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<td>19:00–22:00</td>
<td>Specialty Dinners (Specialty Society Arrangements)</td>
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**Public Private Partnership in Health Care**

FRIDAY 04TH SEPTEMBER 2009  VENUE: SPECIALTY PROGRAM

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19:00 till late

National Doctors Association Official Closing Ceremony Dinner and Dance
Presidents address : Dr Kauve Pomat, President of NDA
Guest Speaker: Mr Michael Malabag, President of PEA
Venue: Airways Hotel

POSTER PRESENTATION
Albert M: The result of first national e-Health survey performed at the 44th Medical Symposium, Rabaul East New Britain

**National Department of Health**

**Service Delivery to Rural Majority and Urban Poor**
1. **PAPUA NEW GUINEA’S VISION FOR PUBLIC PRIVATE PARTNERSHIP IN NATIONAL DEVELOPMENT**

   Honourable Paul Tiensten, MP
   Minister for National Planning & Rural Development

2. **PNG GOVERNMENT POLICY ON PUBLIC PRIVATE PARTNERSHIP**

   Mr Joseph Lelang
   Secretary for National Planning & Rural Development

3. **NATIONAL DEPARTMENT OF HEALTH PLAN FOR PUBLIC PRIVATE PARTNERSHIP IN HEALTH CARE**

   Dr Clement Malau
   Secretary for National Department of Health

4. **PROPOSED COMPULSORY HEALTH CARE SYSTEMS FOR WORKERS IN PAPUA NEW GUINEA**

   Mr David Tibu
   Secretary for Labour and Industrial Relations

5. **PUBLIC PRIVATE PARTNERSHIP IN SURGICAL CARE**

   Dr Ian Dickinson
   Vice President of Australasian College of Surgeons

6. **PARTNERSHIP APPROACH IN HEALTH**

   Dr Donald Matheson
   WHO Western Pacific Regional Office

7. **REGIONAL PERSPECTIVE OF PUBLIC PRIVATE PARTNERSHIP**

   Professor Maxine Whittaker
   School of Population Health, University of Queensland

8. **IMPACT OF COLLABORATION THROUGH PUBLIC-PRIVATE PARTNERSHIP BY OK TEDI MINING BY IMPLEMENTING THE NATIONAL HIV/AIDS RESPONSE IN THE NORTH FLY**

   Ukin R1, Bulungol P1, Kuri M1, Paleu C1, Kepolon J1
   1Ok Tedi Mining Limited Health Services Department

   **Introduction**

   Our theme is “Impact” of Collaboration through Public-Private Partnership by Ok Tedi Mining through its stakeholders by implementing the National HIV/AIDS Response in the North Fly, Western Province”. The Ok Tedi HIV / AIDS response has grown from a few ad hoc activities starting in mid 2003 into a comprehensive program today.

   **Discussions**

   The discussions will be on the four key elements, which have helped strengthen the HIV/AIDS Program, including a:
   1. Political will
   2. Working in partnership
   3. Coordinating partners and
   4. Four(4) pillar of HIV including Prevention counselling and Testing, sexually transmitted infections, condom distributions, cumulative HIV figures, anti-retroviral treatment, Health Workers – ART prescribers, HIV training and workplace training.

   **Challenges**

   The programs currently are effectively managed, but the HIV infection continues to increase each year.

   However, with the winding down of Ok Tedi Mining by 2013, it raises many questions about the partnership in terms of sustainability, coverage and eligibility and hospice care.

   **Conclusions with Recommendations**

   The OK Tedi Mining has shown how to support other stakeholders in terms of developing workplace policies and methodologies to help improve the HIV/AIDS/STI sites.

   Public-Private partnership is the new way forward in addressing health and HIV issues in the Mining Industries.

9. **PNG EYE CARE: ESTABLISHING REFRACTIVE ERROR SERVICES THROUGH PARTNERSHIPS**

   Garap J1,2, Schlenther G1,3,4, Marolia M3, Cronjé S3,4,5
   1PNG Eye Care
   2Department of Health, Port Moresby General Hospital
   3The International Centre for Eyecare Education (ICEE)
   4School of Optometry and Vision Science, UNSW
   5Vision Cooperative Research Centre

   **Background**

   Most cases of uncorrected refractive error can be easily and cost effectively managed with a suitable pair of spectacles, yet many people in PNG do not have access to these basic eye care services. Limited resources are available to address the problem, and spectacle provision is largely unaffordable.

   The establishment of local capacity through a non-government organisation (NGO) and the training and appropriate deployment of local eye care personnel to deliver refractive services within public hospitals, create access to refraction services and alleviate pressure on hospital eye care personnel. Optical workshops staffed by trained spectacle technicians ensure the availability and
Public Private Partnership in Health Care

affordability of suitable spectacles, while also introducing a cost-recovery element.

Discussions

This presentation will discuss the key elements constituting the collaboration between the International Centre for Eyecare Education (ICEE), PNG Eye Care, the National Department of Health, Port Moresby General Hospital, Mount Hagen General Hospital and Angau Memorial Hospital (Lae) to establish sustainable refractive error services in PNG.

Conclusion

The public-NGO partnership is a cost-effective way of addressing refractive error blindness and vision impairment.

10. OPERATION OPEN HEART PROGRAM: A PUBLIC PRIVATE PARTNERSHIP SUCCESS STORY

Tefuarani N1, Tovilu M2, Lun L3, Amana J, Tapaua N3, Karu A4 and Kilalang C3

1 SM&HS, UPNG
2 Buka Hospital, Autonomous Bougainville
3 PMGH, NCD
4 Goroka General Hospital, EHP

Introduction

The Operation Open Heart (OOH) team simply known as the "Heart Team" has been coming to Papua New Guinea (PNG) over the last sixteen years. They have been supported by the PNG team every year.

The project is coordinated from Sydney Adventist Hospital jointly with the Adventist Development Relief Agency (ADRA). It is supported by AusAid through the Royal Australian College of Surgeons (RACS), the Pacific Island Project (PIP), the Tertiary Health Services Project (THSP), and now Health Education Clinical Sciences (HECS), the National Department of Health (NDoH) and numerous companies from both PNG and Australia.

The team consisted of specialist nursing, medical, surgical and technical professionals. A visit that is possible through an invitation by the NDoH and a visit that is now recognised as an annual event for this country.

Objectives and Aims

Operation Open Heart provides cardiac surgery to developing countries, an area usually not served by indigenous programmes. The aims of these visits to PNG are: to teach PNG staff the use of high tech equipment such as echocardiography to select appropriate candidate for cardiac surgery, operate on patients in need of cardiac surgery and train PNG staff involved in anaesthetic, medical, paediatrics, surgical and nursing management of patients having cardiac surgery. In addition provide teaching for medical and nursing staff in hospital in areas of care of cardiac surgical and intensive care patients.

Funding

The team members continued to fund their own way to and from Papua New Guinea. They are supported from various sources including Australian businesses, occasionally the Australian Air force for the transportation of personnel and equipment and AusAid through currently the RACS and THSP and HECS.

Support from PNG was provided as usual by the regular organisations including, TNT Air Cargo, Air Niugini, Ela Motors and Rotary and many other companies, individuals have contributed either in cash, kind, goods or services.

Overall surgical results

The overall total for this program is now 648 patients of whom 642 were cardiac and 6 non-cardiac patients. A total of 11 deaths, a case fatality low of 1.7%

Achievements

With an average of sixty operations per year in the last 4 years, there is no doubt that the program's objective of providing a service not routinely available was achieved.

The program's second objective, to teach and transfer skills to national counterparts was achieved with skills transferred to paediatricians, adult cardiologists, cardiothoracic surgeons and anaesthesiologists and OT and ICU nurses.

Conclusions

The program has been very highly successful in it's aim of service provision and skill transfer. It is a programme, which is dependent on individual and community philanthropy, substantial support from the Australian government through Ausaid, support from the PNG National Department of Health, the Port Moresby General Hospital, and the outstanding commitment of a group of Australian professionals and their PNG colleagues.

Future

It is hoped that NDoH and the National Government will support fund the PDA program all year round, continue to train key workers, unite the team members at PMGH and finally fund the establishment of a Cardiac Unit in the near future.
11. PARTNERING FOR HEALTH SERVICES IN THE NORTH FLY HEALTH DEVELOPMENT PROGRAM

Kewa K
Implementation Manager
North Fly Health Services Development Program
JTA International LTD

Background

In August 2008, Ok Tedi Mining Limited (OTML) approved the North Fly Health Services Development Program – a K20 million, 5-year partnership for the health program focused on strengthening health services in the North Fly District of Western Province.

The Program commenced in January 2009 and involves a close collaboration with Government, churches and key stakeholders to sponsor improvements that will immediately have an impact upon the delivery of key services. This includes distribution of essential medical supplies and vaccines to remote facilities, transportation, radio repairs, basic infrastructure repairs (toilets, taps, pumps, water and sanitation), Maternal Child Health (MCH) patrols and health promotion campaigns.

Aims

The aim of the Program is to work with existing service providers to strengthen and build the existing health system in accordance with government policy and programs.

Programs and Partnerships

Key partners to the Program are OTML, Ok Tedi Development Foundation (OTDF), Evangelical Church of Papua New Guinea (ECPNG), Catholic Health Services (CHS), Fly River Provincial Government (FRPG), North Fly District Government (NFDG) and Local Level Government (LLG). JTA International is the Implementation Partner. The Program is providing on the ground evidence of how partnerships between the public and the private sector can contribute to the delivery of government policy to remote and underserved communities. Partners are not bound by formal contractual arrangements. Partner obligations, roles and responsibilities are outlined in a Program Charter, which documents partner commitment to the Program.

Discussions

This paper outlines the key elements of the approach, the advantages and the challenges it had during the early stages of the program. It will also discuss how the program team approached to mitigate future risks and foster existing strengths. It will further outline and discuss the role of a third party Implementation Partner in coordinating the partnerships, the progress and the activities of the program. It will discuss the program implementation challenges, the unique opportunities to support long term, sustainable development of health services in remote and underserved areas.

Conclusions

The North Fly Health Services Development Program demonstrates a good example of a partnership philosophy.

12. THE MILLENNIUM HEALTHY VILLAGE: THE SOLUTION TO THE COMMON PUBLIC HEALTH PROGRAMS AFFECTING PNG?

Lusem F1, Selve B2, Usurup J3, Hauquitz A4
1Village Planning Committee, Sianus Village, Lihir Island
2Community Health Coordinator, LGL
3Project Manager Lihir Island Health Program
4Senior Lecturer, James Cook University

Background

In spite of all our attempts to eradicate public health problems we continue to face in Papua New Guinea (PNG) very little seem to change even with external funding in the million of US dollars. In Sweden malaria was eradicated, in England and Wales and malaria mortality decreased before the availability of anti-malarials.

The Millennium Health Village (MVH) is a concept that is currently on trial in Lihir Island with the merging of the UNDP Millennium Development Goals, the NDOH Healthy Island Concept, and Millennium Village goals. It has similarities but specifically tailored or adapted to suit the local situation and then prioritized. Fundamentally, the objective is community ownership, less external influence (funding etc) and private, public partnership within the geographical of a mining company.

Aims

To reduce the prevalence of common health problems through community driven initiatives in partnership with resource developers and develop a template for partnership development.

Methodology

Started with community consultation to establish the local organizational skills that currently exist in the community in partnership with local authorities and development partners.

Collection and evaluation of data available. Tailoring of the millennium Development Goals to fit with PNG village situation. A trial on the island of Lihir with prioritization of set objectives.
Results

Low malaria rates in Sianus prior to the time of the Healthy Island or Healthy Village program in the village. The projects are successfully running in partnership with developers.

Conclusion

The Millenium Healthy Village concept has shown to have solved common public health problems.

13. CURRENT HEALTH INSURANCE IN PAPUA NEW GUINEA

Dorgan W

Managing Director Pacific MMI

14. A PROPOSED HEALTH INSURANCE MODEL FOR PNG

Gene M

Health Insurance Consultant

15. HOW COULD WE PROVIDE MEDICAL INSURANCE COVER TO THE RURAL MAJORITY AND URBAN POOR IN PAPUA NEW GUINEA?

Rageau O¹ Rakilea R²

¹Pacific International Hospital
²Communal Land Development

Background

The people of Papua New Guinea have a vast amount of fortune stored and protected by the Supreme Customary Laws of the Tribal nations of the Melanesian Societies.

Since independence, the state of Papua New Guinea tapped all the wealth through the acquisition process for the wealthy corporate entities from offshore and makes the country one of the richest in the Pacific region and yet its citizens are very poor especially in the rural settings.

Papua New Guinean’s are the communal owners of Customary Lands where all the wealth of the nation was made, and although very rich, there seems to be no medical insurance incentives made available for the common people.

Since 34 years of Independence, the PNG Government has tried its best to develop the customary land but with little success. One major factor obstructing development on the customary land is the diversified culture of over 700 different languages and customs of the people.

Therefore, it is best for those of us who are in higher standings to revisit the unwritten Supreme Customary Law. Take the lead, sustain and utilize the remaining untapped wealth, which can be use for future medical insurance cover by the Rural Majority and the Urban poor.

The best option is to unite the customary landowner’s business interest under one voice or sole vehicle. These forms the Communal Land Development Ltd where by all customary landowners become natural members. The Communal Land Development Ltd will then be the sole company that will be defending the existence of the Supreme Customary Law.

The Communal Land Development Ltd will recognize the value of the individual freedom of choice in every Papua New Guinean. With the new direction, the company will assist the Government and line agencies to help to maintain population-growth, lawlessness, unemployment, poverty, unchristianity and unfair distribution of wealth.

The Communal Land Development Ltd will tackle the “UNFAIR DISTRIBUTION OF WEALTH”.

The MEDICAL INSURANCE COVER will be realized.

16. HIV FINANCING AND ITS EFFECTIVENESS IN PAPUA NEW GUINEA

Worth H¹, Negin J²

¹University of New South Wales, Australia
²University of Sydney, Australia

This paper will discuss HIV financing and its effectiveness in PNG.

Background

In 2008, almost US$65 million was budgeted for expenditure on HIV in PNG. Twenty per cent of this came from the PNG Government. This government contribution to the HIV response has been recurring and has increased significantly – by almost 400% from 2005 to 2008 before a significant drop in 2009 from being the second biggest contributor to the HIV response after AusAID to now being the third largest. The other eighty per cent of funding comes from donors and multilateral agencies.

Beneficiaries

Funding covers support of NACS, funding NGOs to do prevention work among MSM and sex workers, STI control through the health sector, institution-building as well as support to other sectors such as law & justice, education and transport to develop a multi-sectoral response.

Implementors
Civil society organisations including the churches are some of the most significant implementation organisations in the PNG HIV response. Small community groups, large international NGOs and the Catholic Church in particular play a major role in the response.

Cost effectiveness and distribution of funds

Despite the importance of these organisations to the HIV response in PNG, a list of entities receiving funding as of December 2007 from a number of sources including AusAID, NZAID, GoPNG, UN, and GF reveals that 65% of funding went to government bodies, 16% to international NGOs, and 11% to church groups.

While the NHASP 2000-2006 previously allocated 39% of its funds for prevention activities among the general population, the evaluation of AusAID’s PNG National HIV/AIDS Support Project raised significant reservations about the cost-effectiveness of this component. The general prevention activities being pursued did not have the desired results. In the latter stages of the project, there was a realisation that targeted prevention among high risk groups and in high risk areas would be more valuable. AusAID’s evaluation of the NHASP declared that “focusing and intensifying prevention activities in high risk settings are likely to be both effective and cost effective.”

Funding for 2008 was heavily weighted to education and prevention (27%), treatment counseling and support (24%), and leadership and coordination (28%), with only 2% of total funding available for HIV activities allocated to epidemiology and surveillance though 6% was available for M&E. In total, 14% of funding is available for research, M&E, and surveillance providing hope that the data challenge can start to be addressed.

Utilisation of funds and the future

While there is always a great deal of focus on availability of funds for development, the big HIV challenge in PNG and the Pacific is actually the utilisation of funds rather than the sufficiency of funds. Global Fund projects in both PNG and the Pacific have had low levels of disbursement and spending as have other mechanisms such as PRHP and ADB. This is largely due to lack of capacity for delivery and low levels of national ownership of implementation plans.

17. THE COMMON DENOMINATOR BETWEEN ICT/TELECOMMUNICATIONS AND HEALTH CARE IN PAPUA NEW GUINEA

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Background

Health care is directly related to the government’s guiding principle No: 3 “improvements in the quality of life” where it states “to translate the gains from economic growth into higher living standards for all Papua New Guineans” and guiding principle No: 9 “empowering Papua New Guineans and improving skills” promising “to help Papua New Guineans to help themselves through improving access to basic health and education services, information, markets and appropriate technology with a special focus on the needs of those in the informal sector”. These are stipulated in the MTDS (Medium Term Development Strategy 2005-2010).

Aims

The aim of the discussions in this paper is to ascertain the common denominator that could be identified between the ICT/Telecommunication and the health sector against the backdrop of the MTDS principle statements.

Methodology

The methodology was based on first the identification of international pilot project and partners, the mechanism for funding, the development of the design, identification of project sites including implementing sites, the design of the questionnaires, their distributions and interviews and finally the analysis of the data.

Results

Using the observations and experiences of the two ICT/Telecommunications projects, and the results of the survey questionnaire, the presentation will discuss the common denominator between ICT/Telecommunications and the delivery of quality health care in Papua New Guinea against the backdrop of the guiding principles (3), (7) and (9) of the MTDS and the importance of PPP arrangement in undertaking an e-health based service.

The Telehausline and RICS projects provided or identified specific key issues some of which are inhibiting the deployment of technologies in the rural areas or other sectors of the economy while others can promote the adoption of them for purposes such as health care. These have been used to propose the three (3) models in the paper which will be elaborated upon during the presentation. Adequate awareness of the benefits from the project, availability of reliable electricity and other supporting infrastructure, literacy and numeracy skills including firm commitment from the rural partner were identified as important elements on the long term success of such initiatives.

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of an e-health based network/service will be discussed based on the observations of the two ICT/Telecommunication projects. There are associated opportunity costs with decisions made by the respective
Both national and international partners played clearly identified roles in the ICT/Telecommunications projects that saw the realization of the projects. In this instant the availability of WHO and ITU as possible international partners in the e-health project at least in the initial stages could be discussed. ITU under the DOHA Plan of Action has a program that can provide assistance to developing countries and the same applies to the WHO. These avenues could be explored for the possibility of seeking assistance for conducting an e-health pilot project in Papua New Guinea.

Discussion and Recommendations

The discussions conclude by recommending that PPP arrangement is necessary in initiating an e-health pilot project that could gradually be developed into a full sustainable network for Papua New Guinea.

HEALTH CARE AND INFORMATION TECHNOLOGY CONVERGENCE

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Background

For decades, Healthcare Industry face challenges in adopting Computerized Healthcare Systems due to complex information requirement, huge investment cost, lack of technical expertise to manage IT systems, and assessibility to information when needed. Today, we have new technology supported by proliferation of internet connectivity and services provider that provides the basic ingredients for successful adoption of Information Technology.

Aims

This presentation is to showcase a best of breed solution that support the delivery of better healthcare services to the patients.

Methodology

System was designed based on Healthcare Industry requirements providing easy assess to Patient Data with following key features such as: Electronic Prescription Writer, Patient Registration, Order Entry, Result Processing, Cashering, Appointment Manager, and Claims Processing. Other functions includes Laboratory, Radiology, Doctor's & Nurse's Workbench, Psychology, Staff Scheduling, Claims Management, Room Management, Infodesk, Inventory Control, Expense Management, Purchase Order Processing, and Over-the-Counter transactions.

Results

In this presentation we will discuss the benefits and functionalities of an electronic clinic system to leading to delivery of better Healthcare services.

19. PUBLIC-PRIVATE PARTNERSHIP IN DELIVERING HIGHER EDUCATION THROUGH DISTANCE EDUCATION MODE

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The emergence of global knowledge economy and the rapid expansion of lower level education put a premium on every country to meet the growing demand for higher education. The conventional face-to-face education system is not up to the mark in coping with the rapid growing demand for places in the higher education institutions. The open and distance learning has emerged as an alternative pathway to increase access to higher education.

Owing to the constrained public funding, the education sector is unable to cope with the growing market demand and global competition. Many governments are exploring the options and mechanisms to involve private sector to fill the financial gap. Public-private partnership has thus emerged as a viable option to increasing access to higher education. Such partnerships have accelerated along with the expansion of distance education system during last two decades in order to deliver programs to diverse locations.

Public-private partnerships exist in different formats and vary according to the benefits they yield. Application of public-private partnership in education and more profoundly in distance education is challenging due to misconceptions, lower returns and regulatory landscape.

Public-private partnership has a long history in the development of lower level education in Papua New Guinea, although its role in higher education is a recent phenomenon. The distance education in Papua New Guinea although exists for a long time, it is still at the embryonic stage of development. The public-private partnership in delivering higher education through the distance education mode has been a very recent development in Papua New Guinea.

This paper discusses the concept of the public-private partnership in open and distance education with reference to higher education and the types of partnership that are needed to increasing access to higher education. The paper further explains the public private partnership in delivering
Public Private Partnership in Health Care

20. THE INTERNATIONAL PUBLIC-PRIVATE PARTNERSHIP INITIATIVES OF THE DIVISION OF PATHOLOGY, SCHOOL OF MEDICINE AND HEALTH SCIENCES: TWO WORKING MODELS

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Current public sector pathology services are constrained by a combination of monetary, human resource, infrastructural and technological factors, and their development is constricted by a fragmented national structure and the lack of a rigorous accreditation and quality management process in many laboratories.

This impacts patient care in that certain investigations are not available and of unknown quality. As a result, best empirical therapy can often only be offered the patient, a common feature of many diagnostic and therapeutic services in developing countries.

Two models have been pioneered in the Division of Pathology in collaboration with the Port Moresby General Hospital and international private sector providers of diagnostic and therapeutic health care. These have been based on two principles of:

- Direct patient modelling
- Cooperative equity

These principles are analysed in detail using two models exemplifying these principles, which are now in operation in Port Moresby:

- The Glivec International Patient Assistance Program (GIPAP)
- Pathology Queensland Collaborative Project (PQCP)

The principles outlined are shown to be evolving rather than being present wholly at the start of the project. Sustainability of the projects is now the key element to expand and strategies for this development are discussed.

21. PUBLIC–PRIVATE PARTNERSHIPS IN THE DEVELOPMENT OF BREAST CANCER SUPPORT WORK AT PORT MORESBY GENERAL HOSPITAL

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Brief History


While working as volunteer, the Port Moresby Cancer Relief Society saw the importance of my work among Breast Cancer Patients and arrange funding for various training/seminar and workshop as follows:

1. Training /Seminar – Amoena Breast Care – 2004

My involvements in the Breast Cancer Support work for the past five (5) years have been very challenging and with great interest. The biggest concern, which needs to be improved, is the information to reach mothers/women throughout the country on the importance of early detection, diagnosis and treatments.

From my experience counselling, comforting, encouraging Breast Cancer Patients and their guardians in their journey of undergoing treatment is important. Some patients from other provinces who are away from their families need to be encouraged on the importance of completing the cycle of treatments.
Achievement and Goals

(i) The awareness of Breast Cancer in PNG
(ii) Access to breast prosthesis in Australia
(iii) Breast Care Support Volunteers in PNG
(iv) International Breast Cancer Support group

Conclusion

Our success as an organization will be reflected by the support we receive from all our supporters, Corporate sponsors and the Government. Our commitment to assist our mothers touched with Breast Cancer is to believe and move forward in new dimension with the registration of Papua New Guinea Breast Cancer Foundation Inc.

22. THE LIHIR ISLANDS COMMUNITY HEALTH PROGRAM
FOUNDED ON PUBLIC PRIVATE PARTNERSHIPS

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¹JTA International Ltd
²Lihir Sustainable Development Planning & Monitoring Committee

Mineral extraction operations in PNG are generally located in remote and challenging geographical environments. Often the populations in these locations are isolated from regular government services and service support despite substantial financial gains enjoyed by all levels of government. Lihir Gold Limited, in New Ireland Province, first poured gold in 1997 and the people have since actively pursued a development agenda, including improving their health services, in order to avoid the catastrophic consequences that can occur with mine closure.

The Lihir Sustainable Development Plan (LSDP) encompasses the Lihirian people’s desire for a systematic approach to development in Lihir. It supports their projected vision of a self-reliant and financially independent Lihir by 2030. It is the framework which the Lihirians themselves have developed and upon which they plan to formalize their negotiations with Lihir Gold Limited and systematically pace and finance their political, social and economic development strategies, mobilizing K100m in the process.

In 2008 the LSDP approved the Lihir Islands Community Health Plan 2009 – 2013 and commissioned JTA International to implement the plan through an alliance with the Lihir Mining Area Land Owners Association (LMALA), working collaboratively with the Nimamar Local Level Government (NRLLG), New Ireland Provincial Government (NIPG), the Roman Catholic Church and Lihir Gold Ltd (LGL). The Lihir islands Community Health Program (LICHP) is evidence of the people taking ownership of their health services and having confidence in program delivery through partnering under the public private partnerships model.

The LICHP expounds the LSDP vision for Lihir to be home to healthy, wealthy, wise and happy communities.

Aims

It aims to support the achievement of this vision through improving and strengthening existing health services, including infrastructure maintenance, drugs and equipment supply, human resource development, systems management, clinical care provision, community empowerment and team building to meet PNG National Department of Health Minimum Standards for District Health Services. Key program interventions will focus on achieving NDOH strategic outcomes outlined 2006 – 2008 Health Sector Strategic Plans.

Discussions

This paper represents a development of opportunity and a challenge to the management of sustainable health service delivery in rural communities that coexist with world class mining operations. It draws on difficulties as well as successes in a phased approach to program formation and mobilization under a quadripartite partnership structure during the initial stages of the LICHP. The paper will also provide evidence of the level of planning and due process given by land owner and mine-impacted communities and their ability to support linkages with public health care providers as well as promoting due governance integrating with the public health system.

23. PROGRESS AND IMPACT OF CDI PUBLIC HEALTH
PROGRAM IN THE PROJECT AREAS OF GULF &
SOUTHERN HIGHLANDS PROVINCES

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CDI Management

This paper intends to share experiences by way of accomplishments, impacts and challenges to sustainable progress encountered by CDI and its program interventions. The paper provides an overall overview on the program and discusses significant changes both positive and negative in the lives of the people. It also makes mention of CDI’s inclusive and holistic perspective to community development that aims to highlight its bearing in the interventions undertaken under the program. The paper notes the important role CDI PH program has performed over the years and wishes that these experiences will provide some relevance for consideration by the theme of this symposium.
Organizational Profile

CDI stands for Community Development Initiatives Foundation and established by the Oil companies in 2001 as an independent NGO. After 10 years (1990-2000) of oil development in the Kutubu, Moran, Gobe and Kikori pipeline areas, it was felt by then Chevron and the JVPs that an entity was needed to do the Social Development part of the job while the Company would concentrate more on its core responsibility of business development. As an independent NGO, CDI intends to enable stakeholders, project impacted area communities and CDI itself to build capacity and eventually generate sustainable benefits for people beyond the life of oil and gas production. CDI gets its major funding from the joint venture partners of the petroleum development project.

Aims

It aims to be a sustainable NGO, working in partnership with the Government, Organisations, Donors and Stakeholders to improve people’s livelihoods for sustainable development and endeavours on four principle philosophies - Stewardship, Excellence, Capacity and Sustainability.

CDI has three field based training centres and one in Port Moresby. CDI FM is a significant part of the facilities established for supporting its programs and objectives by disseminating programs messages and information and using radio as a means for stakeholders and targeted communities to discuss development issues.

Programs

CDI at the incipient started with six programs which have been consolidated and streamlined to suite resource allocations, until recently with three programs to fulfill its strategic vision including Public Health, Sustainable Livelihood and Training and Education programs.

Conclusion

CDI program planning is done in collaboration with communities and partners thus ownership is given back to the beneficiaries with tangible impact and sustainability.

Background

The foundation for the treatment of cancer is both an accurate and timely diagnosis, to the enable the most appropriate treatment to be given. In Papua New Guinea cancer affects an estimated 15,000 people annually with 75% of these dying as a result of late diagnosis and inadequate treatment. The re-building of cancer services in Papua New Guinea is of the utmost priority, as globally cancer kills more than AIDS, Tuberculosis and Malaria combined and this mortality is predicted to rise by 40% by 2020 if strategies are not created to address this. Currently cancer patients in PNG are waiting, on average over 115 days, for a diagnostic result. A collaborative telepathology network is presented as an innovative and cutting edge solution.

Methodology

The project will construct a national network of interconnected hospitals through internet technology and empower each hospital to make digital images of processed cancer specimens to facilitate the rapid and accurate diagnosis of cancer. This internet pathology diagnosis will be provided by both national and international pathologists working in an online, virtual and secure environment.

A diagnosis will then be returned by email to the hospital. A Solomon Islands Telepathology Project, forms the basis for the structure of the CTNP, where time to diagnosis was reduced to an average of 12 hours.

To develop sustainability this project is a global partnership between the International Network for the Treatment and Research in Cancer organisation (INCTR), and a software data company based in Basel Switzerland who have developed all the open source software, and the University of Manchester, UK with the University of Papua New Guinea.

Results

The scope of the project will dramatically shorten the time to produce a pathology diagnosis, increase pathology diagnostic accuracy, conduct the first ever global randomised controlled trial of telepathology, allow collaboration between pathologists both nationally and internationally and empower the education and training of doctors in the field of pathology.

Conclusion

The first Telepathology centre will open shortly at UPNG in the first phase and then four pilot sites will be selected to commence phase two of the project implementation, to commence operation in early 2010.
25. MEDICAL EQUIPMENT MAINTENANCE IN PNG – A CASE FOR PUBLIC PRIVATE PARTNERSHIP

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Background

It is a fact of life that maintenance of expensive and essential medical equipment is practically non-existent throughout the country. This was underscored during the duration of the AusAID funded PNG Medical Equipment Management Project (MEMP). This Project, which ran from 2000 until 2003, attempted to address the serious problems of medical equipment repair and maintenance in the Provincial hospitals. The author was one of the MEMP team.

The Project was only marginally successful, and was terminated much too early to have any lasting effect. The comprehensive training of biomedical technicians undertaken by the Project was not followed up and, as a result, many trainees left for greener pastures. Those remaining were not given opportunity for ongoing education and training, nor were they, in general, properly supported by their respective hospitals.

The Project encouraged hospital managements to introduce a line item for medical equipment maintenance in their respective budgets. Sadly this did not occur, with the predictable result that equipment could not be fixed because of a lack of spare parts.

The problems were further exacerbated by the age of medical equipment generally. A life span of 10 years is the most that we can expect, yet much equipment was older than this. Of course, the older the equipment, the harder it is to acquire spares in order to carry out a successful repair. The result was that the hospital technicians were seen as ineffective by management as they were incapable of fixing the equipment, even after completing their training.

Equipment Management in Australia

Public Hospitals throughout Australia have the benefit of access to biomedical services. In the larger hospitals this is provided in-house. However, there is still much equipment that is contracted out to third party suppliers.

The Private Hospitals invariably rely on service contracts with third party suppliers. However even then, some suppliers will station their staff permanently in the larger hospitals in order to carry out routine functional testing and biomedical screening.

This model, with some variations, is the one used in Australia, New Zealand and many other developed nations.

Prospects for Equipment Management in PNG

Much new equipment has been installed in hospitals throughout PNG, both Public and Private. There is no program of technical management of this equipment.

We need to look at the possibility of a Public Private Partnership for medical equipment management either on a National level or, failing that, on a hospital-by-hospital basis. Money, as always, is the problem and the key. However, to ignore the issue will mean further increased costs in the future as the new equipment that is being supplied now, falls into disrepair AS IS ALREADY HAPPENING.

26. A NEW ACT: ARTEMISININ-NAPHTHOQUINE COMBINATION (ARCO™) THERAPY FOR UNCOMPLICATED FALCIPARUM MALARIA IN ADULTS OF PAPUA NEW GUINEA: A PRELIMINARY REPORT ON SAFETY AND EFFICACY

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Background

The use of antimalarial drug combinations with artemisinin or with one of its derivatives is now widely recommended to overcome drug resistance in Plasmodium falciparum as well as Plasmodium vivax malaria. The fixed oral dose artemisinin-naphthoquine combination (ANQ; ARCO™) is a new generation of artemisinin-based combination therapy (ACT) undergoing clinical assessment.

Aim

We assessed the safety, efficacy and tolerability of artemisinin-naphthoquine combination in areas of multi-drug resistance to generate preliminary baseline data in adult population of Papua New Guinea.

Methods

The clinical assessment was an open-labeled, randomized, two-arm study comparing artemisinin-naphthoquine (ANQ) combination as a single dose regimen and 3-days regimen (10mg/kg/day) of chloroquine plus single dose sulphadoxine-pyrimethamine for the treatment of uncomplicated falciparum malaria with 28 days follow-up in
Public Private Partnership in Health Care

an adult population. The primary outcome measures for efficacy were day 1, 2, 3, 7, 14 and 28-day cure rates. Secondary outcomes included parasite clearance time, fever clearance time, and gametocyte carriage. The main outcome measures for safety were incidences of post-treatment clinical and laboratory adverse events.

Results

Between June 2005 and July 2006, 130 patients with confirmed uncomplicated *Plasmodium falciparum* were randomly assigned to receive artemisinin-naphthoquine and CQ+SP. Only 100 patients (51 in artemisinin-naphthoquine group and 49 in CQ+SP group) were evaluated for clinical and parasitological outcomes. All the patients treated with artemisinin-naphthoquine and CQ+SP showed adequate clinical and parasitological response with 28 days follow-up. The cure rate for ANQ on day 1, 2, 3, 7, 14, and 28 was 47%, 86%, 92%, 94%, 94% and 94%, respectively. Recrudescence accounted for 6%; all were cleared on day 14. For CQ+SP treated group the cure rates were 24%, 67%, 82%, 82%, 84% and 88%, respectively. Recrudescence accounted for 10%; all were cured on day 28 except one subject. Both regimens were well tolerated with no serious adverse events or fatalities being observed or reported during the study period. Gametocyte carriers were higher in CQ+SP post-treatment than ANQ post-treatment (41% versus 12%; p<0.05).

Conclusion

While these data are not themselves sufficient, it strongly suggests that ANQ combination as a single dose administration is safe and effective for the treatment of uncomplicated *Plasmodium falciparum* malaria in the adult population of Papua New Guinea and deserves further clinical evaluation.

27. COUNTRY-WIDE PREVALENCE OF MALARIA – IMPLICATIONS FOR MALARIA CONTROL INTERVENTIONS

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Background

Malaria is endemic throughout Papua New Guinea with the exception of the highlands where transmission is either absent or mainly epidemic. All four human malaria species occur, but endemicity varies widely. *Plasmodium falciparum* is dominant in areas with high transmission and during epidemics while *P. vivax* is more abundant in some low-transmission highland areas. The residual spraying program in the 1960s and 70s along with mass administration of chloroquine which was abandoned later has contributed to the current endemicity levels and species composition.

Aim

The aim of this study was to provide an up-to-date assessment of malaria prevalence throughout Papua New Guinea in order to inform the National Malaria Control Program. In addition, we investigated the correlation between insecticide-treated mosquito net coverage and malaria prevalence and species composition.

Methods

Within the frame of the PNG/Global Fund Malaria Control Program Evaluation, blood surveys were scheduled for 32 districts throughout Papua New Guinea between October 2008 and July 2009. Two villages were randomly sampled in every district and finger prick blood samples were collected from all available members of approximately 30 households per village. Mosquito net ownership and usage were recorded simultaneously. Blood smears were analysed by light microscopy at PNG-IMR.

Results

By mid-June 2009, 25 districts were covered and 4390 blood smears had been prepared from 1475 households in 51 villages. The survey will be completed by July 2009. Blood slides are currently being read by PNG-IMR microscopists. Prevalence of malaria infection and species composition will be presented in relation to geographical area and altitude, mosquito net coverage, usage and date of large-scale distribution.

Conclusions

Results are expected to provide a better understanding of current malaria prevalence patterns across PNG, which is essential to target malaria control interventions effectively. Any positive effect of widespread use of mosquito nets on malaria prevalence can support the intensification of net distributions. On the other hand, prevalence data might also suggest complementary control interventions for particular areas.

28. BIOLOGICAL DIVERSITY AND GENE POLYMORPHISMS ASSOCIATED WITH KNOCKDOWN RESISTANCE IN MEMBERS OF THE PAPUA NEW GUINEA ANOPHELES PUNCTULATUS SPECIES COMPLEX

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Limited work has been done to define diversity among the *Anopheles punctulatus* species complex mosquitoes (*A.punctulatus* [Ap], morphologically indistinguishable *A.farauti* 1-8[Af], *A.koliensis*[Ak]) in Papua New Guinea (PNG). Evaluation of marker genes is necessary to understand biodiversity of PNG Anophelines. The kdr mutation in the voltage-gated sodium channel gene (VGSC), conferring knockdown resistance to pyrethroids and DDT, provides an additional genetic marker of interest given its potential association with pyrethroid resistance. To characterize the biodiversity of Ap complex we have analyzed 13 isolates, collected from the Madang and East Sepik Provinces in PNG, for genetic markers including portions of the internal transcribed spacer 2 rDNA(ITS2), cytochrome oxidase I(CO1), 18SrDNA genes and the VGSC gene fragment containing kdr. Sequence alignment and phylogenetic analysis was performed using ClustalW and NJ method. Analysis included previously published sequences and used African Anopheles species, *A.gambiae*(Ag) and *A.funestus*(Af), as outgroups. Single nucleotide polymorphisms (SNPs) observed among members of different species. Some SNPs, however, were only found within members of the same species. In contrast to comparisons between Ap complex and Ag and Af (Alignment score 55-66; Ag vs Af=90) the alignment scores for 18SrDNA (723-836bp) among members of the Ap complex were more similar (Ap vs Ak = 90-91; Ap vs Af1=87-91; Ap vs Af4=93-94; Ak vs Af1 =96; Af1 vs Af4=93-94). Observed alignment scores for 18SrDNA comparison within species from previously published sequences and our present collections were Ap=94-97 (distance between collection sites: 140km), Af1=99 (440km), Af4=99-100 (720km), Ak=99 (1600km). Individual Af1 and Ak samples were separated by the Bismarck and Solomon Seas respectfully. Understanding the genetic diversity of malaria vectors in endemic regions becomes a necessary part of malaria control and integrated vector management. Since long lasting insecticide-treated bednets (LLINs) are being distributed throughout PNG, it is important to evaluate genetic markers like those chosen here to monitor mosquito-targeting control measures. These tools will enable evaluation of overall genetic diversity within and between vector populations (species and strains) and elucidate associations between specific mutations (kdr) and susceptibility to pyrethroids used in LLINs.

29. A NEW ASSAY FOR SIMULTANEOUS DETECTION OF MUTATIONS ASSOCIATED WITH PLASMODIUM VIVAX DRUG RESISTANCE

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Renewed interest in *Plasmodium vivax* malaria has been sparked recently by the description of severe cases of the disease, reemergence in different areas, and reports of drug resistance. In Papua New Guinea (PNG), *P. vivax* is exposed to the common antimalarial drugs, artemisinin derivatives, amino-4-quinoleines and sulfadoxine-pyrimethamine using regimens that may be suboptimal for this parasite and therefore contribute to development of drug resistance. To investigate changes in parasite populations following implementation of new treatment regimens, we developed a new assay allowing the simultaneous detection of *P. vivax* single nucleotide polymorphisms (SNPs) associated with drug resistance, in *pvdrug* (12 alleles), *pvthsps* (4 alleles) and *pvmdr1* genes (2 alleles). This assay is based on multiplex ligase detection reaction-fluorescent microsphere technology applied to products of a nested multiplex PCR. It was validated using wild type and mutant sequenced isolates, and 234 samples from field studies conducted in PNG. The assay detected all 3 genes in 200 of the field samples (85.5%). Three (1.5%) of these samples displayed a mutant allele for *pvthsps*, 167 (83.5%) for *pvdrug* and 111 (55.5%) for *pvmdr1* genes. Only 23 samples (11.5%) had a wild type allele for all 3 genes. 153 samples (76.5%) displayed infection by multiple strains; overall, we observed a mean multiplicity of infection = 2.

These preliminary results are consistent with both the rate of mutations previously observed in PNG and the rate of polyclonal infections. This new assay will be used for a country-wide assessment of the prevalence of molecular markers of resistance in *P. vivax* and to compare parasite populations between regions where different drug pressures are known to have occurred. This data will help to improve our understanding of the relationship between drug pressure and selection of resistant parasites in PNG and other areas endemic for *P. vivax*.

30. EVALUATION OF MALARIA CONTROL INTERVENTIONS AND OPERATIONAL RESEARCH FOR MALARIA CONTROL UNDER THE GLOBAL FUND MALARIA GRANT

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Background

The Global Fund to fight Aids, TB and Malaria (GFATM) has supported Papua New Guinea in the large scale free distribution of long-lasting insecticide-treated mosquito nets (LLIN) and improvement of malaria diagnosis between 2004 and 2009. A proposal for a new round of funding starting in 2009 has been approved by the GFATM. It includes the
country-wide implementation of artemisinin-based combination therapy, improved diagnostics, including rapid diagnostic tests and more LLINs along with health worker training and behaviour change campaigns. The interventions are accompanied by a comprehensive monitoring and evaluation (M&E) component which is carried out by PNG-IMR in collaboration with partners responsible for the implementation of the interventions. Furthermore, operational research (OR) will provide scientific evidence on specific questions raised by the Malaria Control Program and its stakeholders.

Aim

The aim of the M&E component is to provide accurate and timely data on the outcome and impact of interventions implemented under the GFATM grant. Information on changes in the malaria situation will be essential for program managers and policy makers. Needs-based OR aims at supporting evidence-based decision-making on malaria control strategies. Both parts also aim to build research capacity among young local scientists.

Program description

The M&E component will apply to a combination of complementary approaches including surveillance in selected sentinel sites, national health indicators and interventions and analysis and modeling of National Health Information System data.

OR needs which are of relevance to the national program will be identified in collaboration with the NDoH, the Technical Working Group (malaria) and other stakeholders. Findings will be disseminated to program managers and policy makers.

This presentation will outline the M&E and OR plans under the new GFATM grant highlighting the roles and responsibilities of the parties involved and discuss the relevance of the research to stakeholders at the district, provincial and national levels.


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Background and Aims

Reticulocyte enrichment is imperative to study red blood cell pathophysiology as in sickle cell studies, anaemia, cell transplant and malaria. In the latter, reticulocytes constitute the cellular target for *P. vivax*, which causes 70-80 million cases annually and importantly, studies of this specie are hindered immensely by the lack of long term *ex vivo* culture techniques. At the heart of this setback is the difficulty of obtaining sufficient reticulocytes which unfortunately matures in 2-3 days *in vitro*. Immunomagnetic and physiological methods can enrich reticulocytes up to 95-100% but are too burdensome and costly for malaria research. Furthermore, reticulocytes obtained from haematochromatotic patients and HSCs/CD133+ culture technologies are unavailable to most vivax endemic countries and the latter is by far costly. Here we investigate a simple and cheap technique to enrich reticulocytes from umbilical cord blood (UCB) by minimizing KCl loss.

Methods

UCB was obtained from mothers post partum at the Yagaum and Alexishafen Health Centres in Madang. Reticulocytes were concentrated using a KCl loss minimization technique and assayed using lab strain *P. falciparum* 3D7 in McCoy’s 5A or Waymouth media supplemented with 20% human AB serum at 37°C in an atmosphere of 5% CO2 and 2% O2. Parasite invasion rate was monitored by microscopy analysis of Giemsa stained slides. A double staining (DS) method to observe parasites and reticulocytes simultaneously was used to confirm specific reticulocyte invasion.

Results

Reticulocytes were efficiently enriched up to 95% by the method developed in the present study. *P. falciparum* lab strain 3D7 presented higher invasion rates in reticulocyte-enriched cultures than in control cultures under the same conditions. No improvement was detected in short term culturing of *P. vivax* isolates using the enriched reticulocytes.

Conclusions

Enrichment of reticulocytes in UCB by the KCl loss minimization technique yields viable and functional cells for parasite invasion experiments. *P. falciparum* lab strain 3D7 displays preferential invasion for reticulocytes than for normocytes.

32. EXPLORING THE DYNAMICS OF THE GLOBAL FUND INITIATIVE TO DISTRIBUTE WHO APPROVED ITN’S IN PNG.

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What are the issues in developing partnerships between public, non governmental and private enterprise to establish effective health improvement strategies in PNG.
Malaria is endemic in Papua New Guinea (PNG). Approximately 300-500 million people worldwide are affected by the disease and between 1.5 and 2.7 million die per year. 800000 of these are children. The Save the Children organisation argues that malaria is the second most significant cause of death in PNG (Save the Children, 2006). Felger et al. (1994) estimated that 47% of the population of two villages in PNG were positive for the plasmodium falciparum parasite which causes the most dangerous form of malaria. In 2005 Mueller et al. (2005) undertook a study in eleven villages in PNG, between 1,400 and 1,700 metres above sea level. They found that following the 2002 rainy season, 53% of the inhabitants had symptomatic malaria. In addition, in comparison with previous studies, they reported a 6-10-fold increase in parasite prevalence and a 12-fold increase in enlarged spleens.

Malaria contributes not only to critical care incidents but also in its more insidious form causes chronic anaemia causing ongoing lethargy, maternal death and infant mortality. Thus, Papua New Guinea is faced with immense problems in addressing its malaria burden. In developing its malaria prevention strategy the PNG Department of Health has been working with the Global Fund and Rotary Against Malaria in developing its strategy in deploying WHO approved ITN’s. This paper draws on an evaluative case study conducted for the UNDP (Fitzpatrick and Ako 2007; Ako 2009) to explore the implications of developing an effective interface between the state sector, non-government agencies, charities and local communities in combating the malaria burden in PNG. It will focus on addressing the tensions in establishing a genuine partnership approach which draws on the expertise of the various stakeholders. This will be contrasted with the more usual tendering processes used in deploying health sector funds in PNG.

33. SEVERE CHILDHOOD MALARIA IN PAPUA NEW GUINEA

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Introduction

Although most malaria mortality burden is borne by African children, the study of severe childhood malaria (SCM) elsewhere could provide insights into mortality risks, clinical features and pathophysiology. Like Africa, coastal PNG has intense Plasmodium falciparum (P.f) transmission, but uniquely, also has P.vivax (P.v) circulating. Generally, the epidemiology and clinical patterns of illness in PNG are similar to Africa, but there are some major differences.

Methods

From a recent prospective, observational case control study and two archived datasets, over 400 cases of SCM and 400 controls have been collected from the area around Madang, PNG as part of the MalariaGEN consortium. All samples underwent genotyping for 70 polymorphisms in malaria-associated genes on the Sequenom iPLEX platform. Molecular typing of known local genetic polymorphisms associated with malaria was undertaken on site. In addition, we have done a retrospective meta-analysis comparing Asia/Pacific and Africa SCM descriptive studies.

Results

When adjusted for clinical definition of SCM, mortality rates in PNG children are similar to that in African children. Also included is a sub-group of 15 children presenting with severe illness due to P.v. Preliminary data relating to more than 70 genetic polymorphisms and known local genetic polymorphisms from children will be presented.

Discussions

Notwithstanding the unique cultural and logistic challenges encountered in PNG, we believe research into SCM, that includes a distinctive genetic milieu and the presence of P.v, provides a valuable counterpoint to similar research undertaken in Africa.

34. INTERMITTENT PREVENTIVE TREATMENT OF MALARIA AND ANAEMIA (IPTI) IN PNG INFANTS-AN UPDATE OF CLINICAL EPIDEMIOLOGY

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Introduction

Malaria in PNG is a leading cause of outpatient attendances and given the high burden of malaria in PNG, effective interventions are urgently needed. Evidence showed that Intermittent Preventative Treatment of Malaria and Anaemia in infants (IPTi) is likely to benefit infants and young children in PNG, therefore is an important priority research for PNG.

Method/Objective

The study is a double blinded placebo-controlled randomised trial of infants 3 to 27 months of age. We had two sites Mugil, Madang and Wosera, Maprik. The overall aim of the study is to investigate the effectiveness on malaria prevention by delivering a fixed regimen of anti-malaria drugs at fixed intervals through the WHO EPI. The expected outcome is to see if there is reduction of clinical malaria episodes/child/year.
Public Private Partnership in Health Care

**Update results**

We have reached our target enrollment of 1100 in May 2009 but continuing on with follow up for another year. The total number of adverse events or illness episodes is 7834 for both sites, moreover malaria episodes is 24% (1892/7834). To date there hasn't been any severe adverse event (SAE) related to the study drugs and 4% (305/7834) of SAEs were due to other illnesses such as respiratory or gastrointestinal illnesses. There were 10 deaths, all of which were not related to study drugs either. The full analysis of the data will only begin after the completion of the IPTi study early next year. The expected outcome is to provide necessary information to support the introduction of IPTi to PNG nationwide.

**35. THE EFFECT OF ALCOHOL ON P. FALCIPARUM GROWTH: “DOES IT MATTER?”**

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**Background**

It is a common belief in Papua New Guinea that the consumption of alcohol, when suffering from a clinical malaria episode, leads to amelioration of the clinical symptoms. There is, however, little scientific data concerning the effects alcohol might have on malaria parasites and thus, on the patient’s clinical outcome. The aim of this study was to provide valuable data and to contribute sound scientific basis to the topic as well as making public awareness, by analyzing the effect of ethanol administration on parasite growth in vitro.

**Methods**

Using different concentrations of ethanol we grew a P. falciparum lab line (3D7-M) to determine the invasion/inhibition rates of the malaria parasites. 3D7-M was synchronized with 5% sorbitol and grown in RPMI/HEPES (plus 0.5% albumax II, 2 mM D-glucose, 2 mM L-glutamine, 0.21% Sodium Bicarbonate, 0.1 mg/ml gentimicin, 4% hematocrit O blood) until rich late trophozoites/schizonts stages. This was then cultured in different ethanol concentrations in 96 wells plate (in triplicates) and incubated at 37°C incubator overnight in a candle jar. Thick and thin blood smears were done and parasitemia was determined counting parasitized RBC in 500 RBCs (pRBC + normal RBC, i.e. pRBC/500 RBC X 100 = % parasitemia) after which, invasion/inhibition rates were calculated.

**Results**

Exposure to ethanol affects the parasite multiplication rate (PMR) of 3D7-M. At lower concentrations of ethanol (0.01% to 0.25%), attainable by extensive alcohol consumption, treated cultures displayed an increase up to 25% of their PMR values when compared to the control. By contrast, at saturating doses (0.5% - 2%) we found the diametrically opposite effect and a decrease of up to 25% of PMR values was observed.

**Conclusions**

Contrary to what is commonly believed in Papua New Guinea, extensive alcohol consumption might exacerbate the course of a malarial clinical episode by promoting parasite multiplication and thus leading to the presentation of higher parasitemia. Our in vitro observations might not totally reflect what is happening in physiological observations. Therefore, further studies will be needed to confirm the effect observed prior to its establishment as a new public health awareness campaign.

**36. CONTRIBUTION OF DENGUE FEVER TO THE BURDEN OF ACUTE FEBRILE ILLNESSES IN PAPUA NEW GUINEA: A PROSPECTIVE AGE-SPECIFIC STUDY**

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**Background and Objectives**

Apart from malaria, little is known about the other causes of acute feve in Papua New Guinea (PNG). Dengue Fever (DF) is likely to contribute to the burden of febrile illnesses in PNG; however, its epidemiology is poorly understood. Between 2007 and 2008, we conducted a prospective, age-stratified survey among febrile patients presenting in two outpatient clinics in Madang to investigate the contribution of DF to the burden of fever cases in PNG.

**Methods**

Patients (n = 578; mean age, 9 years old, range [0 – 60 years]) were recruited and followed-up for 14 days. Acute and convalescent sera were obtained tested by rapid diagnostic test and Giemsa staining to exclude malaria. Paired sera from malaria-negative patients were investigated for the presence of Dengue antibody and antigen using IgG, IgM and NS1 antigen tests on paired
Results

Eight percent (CI%95, 6-10) had acute DF, 52% (CI%95, 48 – 56) had malaria and 40% (CI%95, 36-44) had neither. Dengue IgG antibody prevalence in acute sera was 84%. Incidence of acute DF by age group was: < 1 year, 12%; 1-4 y, 9%; 5-9 y, 5%; 10-14 y, 5%; 15-25 y, 7% and > 25 y, 4%. Dengue was more frequent in patients from the urban (11%) compared to rural (7%) areas, whereas malaria was less frequent (35% versus 58%) (p < 0.001). Prevalence of thrombocytopenia (< 150 x 10^9 cells/L) in dengue, malaria and non-malaria/non-dengue groups was 46%, 84% and 47% respectively (p < 0.001).

Conclusions

Acute DF is common in PNG and prevalent in children less than 10 years particularly in urban settings. Nearly 90% of the population below 10 years have Dengue antibodies indicating a high level of exposure in the population to dengue. Thrombocytopenia was common in the malaria than the Dengue and non-malaria/non-dengue patients. The common occurrence of DF, without Dengue Haemorrhagic fever (DHF), in a paediatric population with presumed previous exposure is an important observation. Heightened awareness of Dengue as a cause for fever and the potential for the occurrence of DHF is required in PNG.

38. TRANSMISSION INTENSITY AND BIOMARKERS OF WUCHERERIA BANCROFTI INFECTION 10 YEARS AFTER CESSION OF MASS DRUG ADMINISTRATION TO ELIMINATE LYMPHATIC FILARIASIS IN PAPUA NEW GUINEA

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Background

Typhoid Fever remains a serious health problem throughout the developing world, with Papua New Guinea (PNG) being no exception. The most recent studies conducted in PNG nearly two decades ago determined the disease to be endemic in the highlands. This endemic status has led to complications in the diagnosis using the Widal test, which is likely to lead to some patients being undiagnosed and other patients receiving inappropriate treatment due to overdiagnosis. Our ongoing study seeks to find an accurate, cost effective, and rapid alternative to the currently used Widal test for diagnosis of typhoid fever in PNG.

Methods

This study is evaluating two commercially available Typhoid diagnostic kits, one prototype kit and the currently used Widal test to find an accurate, cost effective, and rapid alternative to the currently used Widal test for diagnosis of typhoid fever in PNG.
transmission of L3 to 1-6 months/yr (NEJM 2002;347:1841). Ten years after cessation of MDA (2008) with no additional interventions, mf+ rates were 0-38% (filarial antigen card test+ rate 7-69%), and mosquitoes bearing L3 were observed for 1-4 months/yr. Among children born after the end of the final MDA (age <10 years) mf+ rates ranged from 0 to 12% and card positive rates ranged from 0 to 50%. The long-term effect of MDA was inversely related to pre-MDA transmission intensity. These data will be discussed in terms of their implications for the global strategy to eradicate LF.

39. INTESTINAL PARASITES IN PREGNANT WOMEN IN GOROKA, EHP - RESULTS FROM THE NEONATAL IMMUNITY DEVELOPMENT STUDY

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Intestinal parasitic infections, especially Helminths, increase anaemia in pregnant women, which can result in low pregnancy weight gain, and low birth weight and predisposes infants to infection. In the highlands of Papua New Guinea, intestinal infections are common with up to 80% prevalence and women are more frequently infected. This study aims to determine the frequency of intestinal infections among pregnant women in the Asaro Valley.

Stool specimens were collected from 187 pregnant women. Samples were processed by standard microscopic methods to identify helminths and protozoa. Parasites were identified from 155/187 (83%) mothers: 48% had Entamoeba histolytica, 37% had Giardia lamblia, 17% had Hookworm ova, 16% had Ascaris lumbricoides ova, 15% had Trichomonas hominis, and 0.5-2% had Hymenolepis nana, Trichuris trichiura ova and Strongyloides stercoralis. Single infection was present in 39% of the women, 27% had double infection, 12% had triple infection, 1% had quadruple infections.

In conclusion, more than 80% of pregnant women were infected with intestinal parasites. Entamoeba histolytica and Giardia lamblia were the most common parasites observed and many women were found to have more than two parasitic infections. Proper hygiene should be practised to minimise the acquisition of these infections, which may in turn reduce anaemia in women and improve pregnancy outcomes.

40. CURRENT DEVELOPMENTS IN BONE MALIGNANCIES

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PHARMACEUTICAL COST EVALUATION OF MANAGING TRAUMA PATIENTS IN ANGAU HOSPITAL

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Introduction

Trauma kills, trauma maims and trauma disables. Trauma is a disease and cancer, trauma has identifiable causes with well defined established methods of prevention and treatment.

It affects the individual, the family, the society and the nation as a whole. Now the burden is affecting the resources that are directed toward the hospital where the trauma victims are managed. It is sad to say that trauma is literally draining the hospital. Due to this fact it has shut down even 50% of its well established trauma centers in the United Sates of America. (THE COSTS OF TRAUMA CENTER PREPAREDNESS. Final Report. June 1, 2002. Trauma Cost Methodology Study, June 1, 2002)

Aim

The aim of this study was to assess and evaluate the age and sex distribution, the etiology of the trauma, the day of incident, any surgical procedures done and the outcome of those were analysed. Also the cost involved especially in the consumption of pharmaceutical items in respect to the etiology was assessed.

Study method

A prospective study was done in ANGAU Memorial Hospital in which every trauma patient that was admitted from 1st January 2006 to 31st December 2006 was assessed. The data was analysed in the EPI info 2004 program.

Result

ANGAU Memorial Hospital had a total of 13,688 admissions of which trauma constituted 5.5%. This was about 52.6% of the total surgical admission. 71% were male and the other 29% were females. The average age group was 24.3 years old with a standard deviation of 14.8 years old. The total days spent was 8317 days with an average of 11 days per case. Assault was the leading cause of admission with 31% followed by fall from height 27%. MVA 15% domestic violence 8%, burns 3% and others including sports 16%. From the assaults and domestic violence, knife, bush knife and fist or boot were the major weapons used. Most of the MVAs were passengers. Hot water burns contributed more than 50% of all burns but fall from height had an equal distribution. 61% of the alcohol related injuries were due to assaults. The incident of assaults progressively increases from Friday and the peak incident are during the weekends.

15 patients had amputations in of their limbs, 13 had their spleen removed and another 13 patients had still joints. From those patients managed 2.64% absconded from the ward, 0.66% left hospital at own risk, another 0.66% were repatriated home, 1.8% were referred to another hospital and 91.8% recovered well.

The area medical store in Lae issued K555,384.44 worth of pharmaceutical items to ANGAU Memorial Hospital specifically in 2006. This was about 17.3% of the total area medical storage distributed. The calculated amount the trauma patients were expected to pay was K25,578.38 but actually they paid K8,911.00. However the amount these trauma patients consumed was K267,557.41. This amount is 48.2% of the total area medical supply usage to ANGAU Memorial Hospital.

MEANINGS OF CIRCUMCISION AMONGST NON-TRADITIONALLY CIRCUMCISED MEN IN PAPUA NEW GUINEA

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In PNG male circumcision is an evolving practice no longer confined to traditional initiation rites. Circumcision has become modernized, practiced by individuals outside of spirit houses.

This paper draws from a qualitative study of past and present (traditional and non-traditional) penile practices and the acceptability of male circumcision for HIV prevention in four provinces in PNG. For this paper, data on the meanings of an emerging culture of non-traditional circumcision will be detailed.

In all four regions of the country, young men underwent dorsal slits in secret locations. The practice of non-traditional cutting did not differ between or within the regions but the reasons why men underwent such cutting did. Two competing reasons for cutting emerged. One drew on traditional narratives of becoming a man while the other narrative drew was influenced by globalising facts about HIV where young men sought penile hygiene and prevention from HIV and other STIs. Of concern in the second narrative of non-traditional cutting is the belief that dorsal slits provide men with the license for more sexual partners.

Understanding the current contexts on circumcision and their meanings is important in the context of PNG’s expanding heterosexual epidemic especially when the acceptability of adult male surgical circumcision is being explored as a potential HIV-prevention strategy.
44. **MORE THAN JUST A CUT: PENILE PRACTICES IN PNG**

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Traditional circumcision is confined to a small number of cultural groups in PNG. With modernity and mobility these practices have not only spread to other areas of PNG but new forms of penile practices have emerged, including different cutting procedures and the insertion of foreign bodies. With any appropriation of a cultural practice meanings change as well. This paper will describe the nature of penile practices currently being undertaken by men.

Qualitative method were used to conduct the research in four provinces of Papua New Guinea. 133 interviews in the form of Focus Group Discussions and In-depth Interviews were carried out. Interviews were transcribed in Tok Pisin and translated into English before being coded thematically.

Findings showed widespread penile alteration practices occurring among PNG men, some customary but the majority non-traditional. Traditional forms of circumcision (dorsal slits) were common in some parts of West New Britain, while modern forms of circumcision was common amongst men in all the study provinces. Other more traditional penile practice included the shooting and cutting of the penis which was found in East Sepik Province. Shooting involves the insertion of a blade of grass into the urethra and when pulled causes the penis to bleed. Other than circumcision the most common penile practice was the insertion of foreign objects into the dorsal skin of the penis shaft or the foreskin remnant remaining after earlier dorsal slit or penile supercision. Ball bearings, horse hair or the end of toothbrushes were common objects inserted. Objects varied in nature and all practices appeared to be most commonly associated with men from the prisons.

Penile cutting and insertion practices in PNG appear widespread and varied. All of such practices were closely allied with notions of masculinity (both modern and tradition) and male sexuality and hence important to understanding these constructs among Papua New Guinean men today.

45. **PLEASURE OR PAIN: PENILE INSERTS AMONGST MEN IN PNG**

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Drawing on data from a qualitative study of male circumcision and other penile practices in PNG, this paper will examine the phenomenon of penile inserts. Specifically this paper will describe the type of objects inserted by men into their penises and the motivators why men with penile inserts identify for inserting objects into their penises. Men identified a range of different objects which they either inserted into or used on their penises. These objects ranged from horse hair and chicken feather to rubber bands, ball bearings and the tips of toothbrushes.

These men, who had by and large been in the prison system, identified two primary motivators for these penile modifications. One reason was to improve sexual pleasure, both for the man and woman. Increased pleasure of this kind was possible for example due to a perceived belief that inserts could increase the size of the penis, delay ejaculation thus increasing a woman’s change of orgasm and the sexual stimulation caused by the inserts themselves. The second reason for penile inserts, was to punish women who were perceived as ‘pamuk meris’, ‘4 kofi meris’ or for those women who had refused sex to them in the past.

The motivators while seemingly disparate often co-existed within the same person. The nature of the sexual encounter – pleasure or pain – was dependent on the nature of the relationship between the man and the woman. Men would pleasure women (in their view) who were not disloyal or promiscuous. When men sought to punish women the sex was more violent, included rape and men sought to ‘damage’ women. This type of sexual practice is not only detrimental to women sexually and emotionally but also carries with it an increased risk for the transmission of HIV. The increasing phenomena of penile inserts, particularly amongst prisoners, needs to be viewed as having important health implications not only for men but primarily the women they either seek to pleasure or cause pain.

46. **DIABETIC FOOT ULCERS IN POMGH 2003-2008. REVIEW OF PRINCIPLES OF EFFECTIVE PREVENTION AND MANAGEMENT OF DIABETIC FOOT**

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**Background**

Foot ulceration and infection leading to amputation are common and feared complications of diabetes. Yet these are potentially the most preventable of all complications in diabetic patients. Several studies showed that half of all diabetic foot ulcers can be prevented by education and simple foot care.
Public Private Partnership in Health Care

In Papua New Guinea diabetic foot disease is exacerbated by socio-cultural factors such as the prevalence of walking barefoot, low education, lack of knowledge about the complications connected with diabetic foot, and the low socio-economic status of patients. The primary goal of the study was to depict the scale of the diabetic foot as a community health problem. The secondary goal was to review the current literature in view of implementing a more effective preventive strategy for the diabetics.

Methodology

Retrospective study on the patients with diabetic foot admitted to POMGH on 2003 and 2008 was conducted. We also carried out an extensive online search on the prevention and management of diabetic foot ulcer.

Results

Our study showed an increasing trend of diabetic foot ulcers and infections from 1.4 to 2.2 per cent of all surgical patients within the last 5 years in POMGH. Interestingly, over that period the representation of females has increased from one third to almost half of all patients with diabetic foot. Furthermore the patients with diabetic foot complications showed average long hospital stay, 54 days in 2003 and 35 days in 2008. In addition the researches noted that currently at POMGH there is no in place any comprehensive education program on prevention of diabetic foot ulcers and infection, though doctors give some instructions to the diabetics regarding the prevention of foot ulcers. Having analyzed and the existing diabetic foot ulcer prevention programs the authors suggested the foot care prevention and education program adapted to the situation in Papua New Guinea.

Conclusion

Introduction of comprehensive foot care education program for diabetic patients can reduce bed occupancy and health expenditure on diabetics as well as number of amputations and subsequent disability.

47. PRELIMINARY FINDINGS OF MAMMOGRAPHIC BREAST EXAMINATIONS AT PACIFIC INTERNATIONAL HOSPITAL

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Background

Breast Cancer is one of the major causes of mortality amongst the women population worldwide. Decline in case fatality rates in developed countries has largely been attributed to early detection. Mammography as a component of breast screening is a very useful screening test that can detect cancer in its early stage of development, before it becomes clinically apparent. The introduction and use of mammography as a screening tool in Papua New Guinea has only been very recent. Pacific International Hospital became the first and only hospital in the country to offer this form of x-ray investigation beginning in August 2005. Since then more than 2000 women have voluntarily undertaken mammographic examinations courtesy of a free screening program sponsored by Motor Vehicle Insurance Trust Ltd.

Aim

The aim of this paper is to present the preliminary results of these mammographic breast examinations and discuss potential implications, and make recommendations.

Methodology

We analyzed the results of mammographic breast examinations done in Pacific International Hospital between August 2006 and December 2008, and retrospectively reviewed their demographic data. The mammographic findings were grouped into normal findings, benign findings with no malignancy, indeterminate and malignancy. Features suggesting or raising suspicion of malignancy include: stellate masses or densities, increased density with tissue distortion, abnormal microcalcifications (granular or casting types), plus or minus nipple and subcutaneous tissue retraction.

Results

A total of 1151 mammographic breast examinations were performed between August 2006 and December 2008. The enrolled women age between 15 to 70 years. Positive findings were noted in 6.75% (N = 78) of the examinations while rest (93.25%, N= 1077) were negative. More than sixty five percent (N= 750) of women were 35% or more. Women less than 20 years account for 2.43% (N=28) of the women enrolled. Malignant mammographic features were seen in 50 women (4.35%) examinations. Intermediate features account for 2.4% (N=28). The youngest female with malignant mammographic features is 19 yrs old, whilst the oldest is 70 yrs. Except for two (2), all (48) women were symptomatic. Interval cancers were detected in 3 women.

Discussion and Recommendation

The preliminary results of the screening mammographic breast examinations show that 65% of the detected cancers occur in women aged 35 years or more. The baseline age for screening mammograms varies world-wide. The American Breast Cancer Society recommends age 40yrs as the baseline with subsequent 1-2 years follow-up. Given that 26% of women aged between 30 to 39 yrs show mammographic changes of cancer, we recommend 35 yrs as the baseline age for screening, with 12 monthly follow-up until the age of 50yrs and then 2 years thereafter. Ninety six
percent (96%) of women who enrolled were symptomatic and therefore most had clinical breast abnormalities at the time of screening. We recommend more awareness, regular breast self examination and clinical breast examination to increase detection of early cancers, in clinically asymptomatic women. To make any significant inroads into reducing the burden of breast cancer in the country, a dedicated breast screening centre must be set-up, and supported through a partnership approach between the public and private health care system.

48. UPDATES ON HIV AND AIDS

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49. IMPROVING ACCESS TO CARE AND TREATMENT THROUGH CONTINUUM OF PREVENTION TO CARE AND TREATMENT IN NATIONAL CAPITAL DISTRICT

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2 National Department of Health
3 Helpim Bilong Yumi Project-Hope Worldwide (PNG) Inc.
4 National Capital District Provincial AIDS Committee

Issue

AIDS has become the leading cause of death at major hospitals in Papua New Guinea (PNG) despite availability of antiretroviral treatment (ARV). There are many NGOs and CBOs working in the HIV response in local communities but their activities are not coordinated with the Provincial AIDS Committee Secretariat and gaps exist in the management of in-patient and out-patient referrals for services. In an effort to improve access to care and treatment for PLHIV and other marginalised sub-population the Continuum of Prevention to Care and Treatment (CoPCT) model was introduced in two provinces in Papua New Guinea; NCD and Madang province by Family Health International (FHI) PNG program. This paper will focus on the implementation of CoPCT program in NCD.

Project Description

FHI PNG works in collaboration with donors and other partners to implement the CoPCT model which entails the development of systems that provide high-quality, comprehensive, continuing, and multilevel prevention, care, and treatment. Partners include NDoH, NCD PAC and Hope Worldwide through the Helpim Bilong Yumi Project (HBYP) in NCD. The partners network and collaborate at all levels in a coordinated manner to provide a comprehensive and integrated service for PLHIV and their families. PLHIV and providers of a community home-based care are effectively involved in areas such as voluntary counselling and testing (VCT), adherence counselling and support for antiretroviral treatment (ART), self-care education, and the management of opportunistic infections.

Results

CoPCT coordination committee was formed within NCD PAC for coordinating the program with key partners. Critical referral linkages between HIV care, support and treatment services were strengthened increasing access among Most-At-Risk-Populations (MARPS) and PLHIVs. Community outreach and case management teams effectively relay prevention messages as well as refer clients to satellite clinics. Support groups were formed in the communities to provide quality home based care (CHBC) to PLHIV and their families as well as to make referrals to service providers.

Conclusion

The activities of HIV services providers in local communities are being coordinated with the Provincial AIDS Committee Secretariat; gaps in in-patient and out-patient referral systems are addressed and access to treatment services are gradually being increased.

50. VALIDATION OF THE ROCHE AMPLICOR HIV-1 DNA TEST FOR EARLY DETECTION OF HIV IN INFANTS BORN TO HIV SEROPOSITIVE WOMEN IN THE EASTERN HIGHLANDS PROVINCE AND NATIONAL CAPITAL DISTRICT

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The increasing incidence of Human Immunodeficiency Virus (HIV) infection is a big public health issue in PNG. After heterosexual transmission vertical transmission from parent to child (PTC) is the second most common route of HIV transmission in PNG. Diagnosing infants under the age of 18 months has been problematic in the past because there were no reliable assays available in PNG for early HIV detection until the recent introduction of virologic testing to PNG. This study aimed to validate and assess the global gold standard for virologic early infant HIV diagnosis; the Roche AMPLICOR® HIV-1 DNA PCR v1.5 assay using dried blood spot (DBS) specimens.

The assay was validated in a number of ways, firstly, by testing well characterised dried blood spot and kit controls, which indicated that the assay was robust and able to
achieve high reproducibility. Secondly, of 47 infant DBS diagnostic specimens (from two sites in PNG; Goroka (n=21) and Port Moresby (n=26) that were blind retested 100% of the test results were concordant with diagnostic results. Thirdly, the assay results for these patient specimens were compared to results obtained using a serological assay (Vironostika Microelisa System) indicating higher sensitivity and specificity than the serological assay (Roche assay= 100% sensitivity and specificity and Vironostika = 52% sensitivity and 86% specificity).

Amongst the infant cohort tested we detected that 34% of infants (n=16) were HIV positive and 66% (n=31) negative. A total of 42 (89%) mothers of these infants were HIV seropositive. The youngest age that HIV was detection using the HIV kit this small study sample was 3 months.

The implication of early infant HIV diagnosis, as highlighted by this pilot study is that HIV infected infants can be definitively diagnosed and thus initiated earlier on treatment.

51. WOMEN’S VIEWS ON CIRCUMCISION AS AN HIV-PREVENTION STRATEGY IN PAPUA NEW GUINEA

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Circumcision involving the full removal of the foreskin is an HIV-prevention strategy aimed at men, however, it is important to ascertain women’s views of male circumcision and their acceptability of it in their communities.

This paper draws from a qualitative study of past and present (traditional and non-traditional) penile practices and the acceptability of the roll out of male circumcision as an HIV prevention strategy in four provinces in PNG. In particular, this paper will examine the views and opinions of women and girls.

In both provinces women were unaware of current circumcision practices that were taking place in their communities and families and were fearful that such a circumcision program to reduce risk for HIV would increase promiscuity. There appeared to be greater acceptability by some for the circumcision of infants. The majority of women did not know what circumcision was when they understood they were exclusively against HIV-related circumcision. In some areas there was a fear of circumcision and a strong opinion that such a practice was against tradition. Women of all ages in this area feared circumcision would reduce the use of condoms. The few women who knew about HIV-related circumcision were linked with Provincial AIDS Council or generally HIV aware.

Preliminary data analysis suggests that women are not accepting of male circumcision as an HIV-prevention strategy. While it may be argued by some that women and girls are against circumcision because they lack medical knowledge, such women and girls possess complex lifeworld knowledge of their communities and families which needs to be taken into account in the planning of future HIV biomedical prevention strategies.

52. HIV AND THE FAMILY IN PORT MORESBY

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The paper aims to present some findings from a research project Living with HIV and AIDS in Port Moresby: a pastoral approach. Method: ethnography with data collected by participant observation, in-depth interview and document analysis. Data analysis used grounded theory. Setting: PMGH medical ward and STI clinic. Findings: People living with HIV who receive support from caregivers, who have access to medical care and a supportive community can manage their infection and find enjoyment in their lives. However, those who have no home or resources in the city die quickly or struggle to survive. Mode of transmission is commonly heterosexual within a marriage relationship.

Discussion: How is the family who lives in Port Moresby affected by HIV diagnosis? Given the consequences for the family how can the numbers of those infected within marriage be reduced?

Conclusion: there is need to disseminate findings on the impact HIV is having on the family particularly the high rate of adult deaths and the alarming statistics about orphans and other vulnerable children.

53. SEX, CONDOM USE AND HIV DISCLOSURE: PEOPLE LIVING WITH HIV ON TREATMENT WITH A REGULAR PARTNER

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HIV is lived in connectivity with many infections occurring in regular relationships. HIV prevention aimed at preventing at onward transmission of HIV and drug resistant strains of the virus from known HIV-positive people requires an understanding of the sexual practices of people with HIV. Drawn from a mixed method multi-site study of the social experiences of ART for people with HIV in PNG, in this
paper we describe the sexual practices, use of condoms and disclosure of HIV status of a sub-set of people in a study on the social experiences of ART in PNG who had sex in the last six months with a regular partner.

Sampling from ART clinics and PLWH care centers, this study surveyed 374 people with HIV on ART in six provinces throughout PNG. Participants had to be over the age of 16 and on treatment for more than two weeks to participate. All surveys were entered into and analysed using SPSS (v.15).

Only 37.9% of the sample reported having had sex in the last six months. Significantly more men (44.4%) than women (33.8%) reported having sex in the last six months. There was a significant relationship between marital statuses and whether a person in the study reported having had sex in the last 6 months. Fewer than half (46.2%) of the participants who had had vaginal sex with their regular partner in the last 6 months reported that they always used condoms. Lower proportions indicated that they never (22.7%) or sometimes (23.5%) used condoms for vaginal sex. There was high condom use (62.2%) the last time participants had vaginal sex with their regular partner. Nearly all of the participants had disclosed their HIV status to their regular sexual partner (91.8%).

This data suggests that people with HIV on ART in PNG are largely abstaining from sex, practising safer sex and almost all are disclosing their status to their regular partner therefore suggesting that in PNG it is possible to integrate treatment and prevention.

54. WORKING IN PARTNERSHIP TO IMPROVE HEALTH SERVICES IN KAINANTU DISTRICT: EXPERIENCES OF THE HIV/AIDS PREVENTION IN RURAL ENCLAVES PROJECT

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In 2007, the Papua New Guinea National Department of Health, Asian Development Bank, the Kainantu Gold Mine, the Eastern Highlands Provincial Administration and local faith-based health service providers signed a Memorandum of Agreement to join forces on an innovative three-year Public Private Partnership to control the spread of HIV/AIDS in Kainantu District through increased training and support of rural health staff and renovation and equipping of rural health facilities. Barrick Kainantu Limited is the main implementer of the project and to date, has facilitated training for over 90 health workers in all aspects of HIV/AIDS management and has completed the refurbishment of eight rural health facilities in Kainantu as well as undertaking key projects at the Kainantu Rural Hospital. While designed around addressing a specific health need, HIV/AIDS, this project has captured the interest of a wider group of stakeholders that first envisaged to pool resources in order to address the overall health care needs in Kainantu. In addition to providing an overview of the impacts this project has had on addressing HIV/AIDS and meeting basic health care needs in Kainantu, the paper will discuss the strengths and weaknesses of this type of partnership approach to providing health care in rural areas and offer suggestions on how this type of approach might be replicated to address the wider health care needs of rural Papua New Guinea.

55. THE AETIOLOGY OF FEBRILE ENCEPHALOPATHY IN CHILDREN ADMITTED TO PORT MORESBY GENERAL HOSPITAL

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Background

Febrile encephalopathy, defined as fever, seizures, and/or altered consciousness is a common presentation in Papua New Guinea children. The outcome varies from complete recovery to partial recovery with varying degrees of neurological disability and death. Whilst bacterial meningitis accounts for a proportion of the affected children, the aetiology in many remains unclear, but includes malaria, and probably viral encephalitis.

Aim

To understand the aetiology, presentation and outcome of febrile encephalopathy in children in Papua New Guinea.

Study Design

A prospective descriptive study.

Patients and Methods

Children aged between 1month and 11years presenting to the Children’s Outpatient Department, Emergency Department and Paediatric Wards with febrile encephalopathy were included following written consent from their parent or guardian. After detailed history and examination, routine blood samples were taken for full blood examination, blood glucose, and malaria parasites. Aliquots of blood were centrifuged and the serum separated and stored at -20deg C. for subsequent testing for flavivirus IgG and IgM, and other viral serology.
Lumbar puncture was performed unless contraindicated, and CSF collected. CSF microscopy and culture, gram staining, measurement of protein and glucose and latex agglutination testing for Haemophilus influenzae, Streptococcus pneumoniae, and Neisseria meningitidis were performed at PMGH. Zeil Nielson staining and India ink examination were carried out on selected samples. Aliquots of CSF were frozen and stored at -20deg C. for subsequent testing for IgM for Japanese encephalitis, dengue, rubella and measles and for PCR testing for Mycobacterium tuberculosis. Aliquots were stored at 4 deg C for subsequent Mycobacterial culture. The stored Serum and CSF samples were transported by courier mail to the Victorian Infectious Disease Research Laboratory and the Queensland Public Health Virology laboratory for virological testing, and for PCR and culture for Mycobacteria.

Results

149 children were enrolled in the study of whom 129 had a lumbar puncture and CSF examination. 66 had a normal CSF white cell count. A clinical or laboratory-based diagnosis was possible for 140 children. The diagnoses included bacterial meningitis (33, Streptococcus pneumoniae 16, Haemophilus influenza 13 and Neisseria meningitides 4)) tuberculous meningitis (5), probable tuberculous meningitis (18), malaria (10) cryptococcal meningitis (1), flavivirus encephalitis (5) rubella encephalitis (1), hepatic encephalopathy (1) and HIV encephalitis (1). There were 28 cases of meningitis with an unspecified aetiology. Of the 5 children with IgM confirmed flavivirus encephalitis, 2 were positive for dengue, 2 for Japanese encephalitis and in one the virus was unidentified. Twenty five children (including 3 of the 5 children with CSF Flavivirus IgM) had serological IgG evidence of previous flavivirus infection.

Conclusion

The study confirms the importance of Streptococcus pneumoniae and Haemophilus influenzae as major causes of febrile encephalopathy in Papua New Guinean Children. It confirms that flaviviruses are circulating within the community and that flaviviruses including Japanese Encephalitis virus are not an uncommon cause of the febrile encephalopathy syndrome. The study also confirms that tuberculous meningitis is also a common cause of febrile encephalopathy in children in Papua New Guinea, although the burden of disease is not certain.

56. ACUTE BACTERIAL MENINGITIS IN ADULT PATIENTS AT THE PORT MORESBY GENERAL HOSPITAL 1998 - 2008

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Introduction

The causes for Acute Bacterial Meningitis in Adults have changed over the last twenty years and the Antibiotics, (Penicillin, Chloramphenicol and others) are becoming resistant to these bacterial organisms. The objectives were:

1. To see if there are any changes in the causes of Acute Bacterial
2. To see the rate of Bacteriological sensitivity to antibiotics commonly used at PMGH.
3. To see the rate of Bacteriological resistance against the commonly used antibiotics.
4. Review and recommend the treatment for Acute Bacterial Meningitis at PMGH.

Methodology

A retrospective study of 51 CSF culture positive cases collected from the PMGH microbiology records with their corresponding clinical admission notes from medical records of PMGH were analysed.

Results

42 out of 51 Clinical notes were retrieved while 9 charts were missing. The age groups were 13 years and above with mean age of 34.7 years. There were 34 males and 17 females with a ratio of 2:1. Most subjects were from Central Province due to the location of the study. The clinical features were noted to be the same as the previous studies. The most common organisms isolated from the CSF cultures were Pneumococcus (45), Meningococcus (3), Viridans Streptococcus (2) and Streptococcus Pyogenes (1).

The sensitivity rate of Pneumococcus against the commonly used antibiotics from the highest to the least is as follows Erythromycin (40)-100%, Cefaclor (28) -100%, Tetracycline, (27/28) -96%, Penicillin (37/40) -93% Chloramphenicol, (35/38) -92%, Ampicillin (13) -100%, Ceftriaxone, (6) - 100%, Amoxicillin (3) - 100%, Cotrimoxazole (5/6)-83.3% and Gentamicin (2/33)-6.1%.

Resistance rate is as follows, Gentamicine, 30/33- 91% and Cotrimoxazole (1/6)-17%. The Meningococcus was seen to be Sensitive to Penicillin (3/3), Ceftriaxone, (3/3), Ceftazidime, (2/3) and Tetracycline, (2/3)

Discussion

The causes of ABM in Adult patients have change slightly with the emerging of other strains of Streptococcal agents and there is a shift of pattern towards Pneumococcal meningitis predominance than Meningococcal infection. The commonly used antibiotics are becoming resistant to Pneumococcal agents with Gentamicin being the highly resistant with 91% rate. ABM still carries a very high
Mortality rate, (48%) in this study and coma is a worse prognostic indicator. Laboratory facilities need to be up to date with reagents and Quality Control measures for proper Bacteriological studies in the future.

57. IS ROUTINE LUMBAR PUNCTURE INDICATED IN PNG CHILDREN FOLLOWING SIMPLE FEBRILE SEIZURES?

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Introduction

Performing routine lumbar puncture (LP) in children with simple febrile seizures is controversial. The PNG guidelines recommend LP in all children with febrile convulsions in order to avoid missing acute bacterial meningitis. However, we are not aware if meningitis can present with fit alone as its sole clinical manifestation.

Aim

Document the yield of LP routinely done at Modilon hospital; (2) Document clinical signs that predict meningitis; and (3) Formulate an algorithm of clinical signs to guide health workers decide which children need LP.

Methods

In this prospective observational study, we recruited 550 children aged 2 months to 10 years admitted to Modilon hospital over a 2 year period. Inclusion criteria included children with seizures in the setting of a febrile illness and/or children who received LP because of suspected meningitis.

Results

Fit alone (36%) was the leading indication for children receiving LP. However, we did not identify any child with fit alone as the sole clinical manifestation of meningitis (p<0.0001). Neck stiffness was the only significant independent predictor of meningitis (p<0.0001, OR 10.7). Neck stiffness, bulging fontanel, coma, irritability, persistent fever and meningism identified 96% of children with meningitis. The remaining 4% were older children with signs of meningism such as severe headache and photophobia. An algorithm of clinical signs based on our findings will be discussed.

Conclusion

Children with simple febrile seizures alone do not need lumbar puncture. LP should be performed in children presenting with any of the following signs: neck stiffness, impaired consciousness, bulging fontanel, persistent fever, irritability and other signs of meningism.

58. CLINICAL ALGORITHM FOR PREDICTING TB TREATMENT OUTCOME IN ADULT PULMONARY TB PATIENTS AT MODILON GENERAL HOSPITAL

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Background

Tuberculosis (TB) remains the leading cause of death in PNG. This paper presents a study which aims to investigate clinical presentations predicting pulmonary tuberculosis treatment outcome in both HIV positive and negative patients in order to validate the effectiveness of the current treatment regime.

Method

This study is a prospective treatment Cohort Study, based at the TB clinic at Modilon General Hospital, Madang Province. The study began in April 2009 and will end in 2011. All new suspected TB cases aged 15 years or older will be tested for TB by Acid Fast bacilli (AFB) microscopy. We will re-test negative AFB samples with Bleach method1 and Fluorescence Microscopy1. If the AFB results are positive, the patients will be given counseling to HIV screening test. All positive sputum samples will be processed and inoculated into MGIT tube and sent to the WHO Mycobacterium Reference Laboratory in Brisbane for culture and drug sensitivity testing. Clinical examinations, the parameters measured include Weight, BMI, Vital Signs, Blood Pressure, including Chest X rays and history of illness. We test sputum conversion by AFB microscopy, at second, fifth and at the completion of treatment. All study cases were reviewed every month with all findings documented.

Outcome and analysis

The main outcome of TB treatment is determined by sputum conversion results, as cure, slow cure and chronic or treatment failure. We will compare clinical data with the treatment outcome between TB/HIV group and TB with HIV negative. This cohort study will provide necessary information for monitoring the treatment outcome of PTB patients. In low resource settings, like PNG where the diagnosis for culture is not available to all hospitals, clinical algorithm can be useful to predict the treatment outcome.
59. RISK FACTORS OF NEONATAL MORTALITY IN THE KASSENA_NANKANA DISTRICTS OF NORTHERN GHANA: 2001-2005

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Introduction

In Africa, neonatal mortality remains high yet little knowledge on risk factors in small rural geographical areas exists and this need to be addressed to guide appropriate policy making that focuses on children in the first month of life. This study was conducted to identify risk factors for neonatal mortality in the Kassena-Nankana District in northern Ghana using longitudinal Demographic Surveillance data.

Method

Logistic regression models were fitted to assess the relationship between household and maternal socio-demographic characteristics and neonatal mortality.

Results

There were 551 neonatal deaths out of 19 340 live births recorded in the years 2001-2005, giving an overall death rate of 28.5 per 1000 live births. Children residing in rural areas had increased risk of dying than living in the urban areas (RR=2.24 95% CI=1.16-4.34 P=0.016), while children borne of a multiple birth outcome showed reduced risk of neonatal mortality (RR=0.20 95% CI=0.14-0.28 P<0.0001). Children of birth order higher birth order had reduced risk as compared to those children of first birth order; 2-3 (RR=0.60 95% CI=0.44-0.81 P=0.001), 4-5 (RR=0.56 95% CI=0.38-0.84P=0.005) and 6+ (RR=0.50 95% CI=0.31-0.8 P=0.005). More children died (56.7%) in the in the first week of life (0-7days). SES was also found to be a predictor of neonatal mortality (RR=0.70 95% CI= 0.51–0.96 P=0.026).

Conclusion

Efforts to alleviate the burden of neonatal mortality at the community level will require more skilled personnel to identify risk pregnancies during ante-natal visits and adequate health care be given to children in this vulnerable age group. Also interventions aimed at reducing mortality should in- cooperate programs on how to improve living standards of mothers and children.

60. A PROSPECTIVE ANALYSIS OF A PAPUA NEW GUINEAN BCR-ABL1 POSITIVE CHRONIC MYELOID LEUKAEMIA (CML) COHORT WITHIN THE GLIVEC INTERNATIONAL PATIENT ASSISTANCE PROGRAM (GIPAP)

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GIPAP is a newly introduced public-private partnership for the provision of free Imatinib mesylate (Glivec) to Papua New Guinean citizens with insufficient funds or insurance diagnosed with BCR-ABL1 positive Chronic Myeloid Leukaemia (CML) in chronic or accelerated phase or Gastrointestinal Stromal Tumour (GIST).

Previously analysed nationally available data demonstrates that CML comprises 27 % of all leukaeas with 53 registered cases from 2001 to 2008, the annual incidence being 1.1 cases per million population. Most cases of CML present in the age range 26-30 with an equal sex ratio. 52% of CML cases presented in chronic phase, whilst 28% presented in accelerated phase, the majority of cases being diagnosed using bone marrow morphology at PMGH (1).

61. ASSESSMENT OF PFCRT-MEDIATED CHLOROQUINE RESISTANCE TO P. FALCIPARUM MALARIA AT MALALAUAN STATION (KEREMA DISTRICT, GULF PROVINCE, PAPUA NEW GUINEA)

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Background

Chloroquine has been in use in Papua New Guinea (PNG) for a long time. Because of misuse, this drug has now lost its efficacy due to the emergence of resistant strains in most parts of PNG. Recently, it was shown that after chloroquine has been withdrawn from the market, chloroquine-sensitive Plasmodium falciparum re-emerged and chloroquine could again be used successfully as an antimalarial. Surveillance of parasite populations is, therefore, important to decide whether chloroquine could be re-introduced in areas where it was removed or replaced in areas where it is still in use.

Aim

To assess the prevalence of the most pivotal polymorphism in P. falciparum mediated chloroquine resistance, the pfcrt T76 mutation at Malalaua station (Kerema district, Gulf province, PNG).
Method
Dried blood spot samples were collected and tested using a nested PCR method.

Results
35 participants were treated for clinically diagnosed malaria and blood samples were collected on filter paper at for identification of parasite carrying the chloroquine resistant transporter (pfcrT) gene mutation. pfcr776 mutant alleles were noted in 63% (22/35) of the samples collected. The results of this study provide further evidence to the selection for the pfcr776 mutant allele in PNG but also to the accumulated international evidence of pfcr776 being present in malaria endemic areas thus providing a means for subsequent chloroquine resistance in P. falciparum malaria.

62. EFFECTIVENESS OF TUBERCULOSIS TREATMENT AT MOREGUINA HEALTH CENTER

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Background
Tuberculosis (TB) is still a major problem in terms of management and preventive measures in the country. The two major concerns are the parallel rise of TB with the increasing incidence of HIV infection, and the development of multiple drug resistant TB organisms. Although Short Course Chemotherapy regimens have proven to be effective, TB has not come under control.

Aim
The aims of the study are to (1) to collect and analyze data of TB cases, (2) find out the age, gender, and geographical distribution of the disease (3) find out the cure rates and treatment success of TB, within the last 7 years at Moreguina Health Center.

Methodology
The study was a quantitative, descriptive, and more of a retrospective data collection. The technique used was collection of data from TB registry book. The information retrieved included the registration number, name of patient, sex, age, address, date treatment started, disease classification, patient category, sputum examinations, and the treatment outcome. The data was then analyzed into the following variables: age, sex, village, category of patient, type of TB, and treatment outcome, for each year. A total of 256 TB cases were retrieved from the records from the years 2002 to 2008. Using the Microsoft Excel Software, the data was organized in graphs and tables.

Results
This presentation will discuss the distribution of TB in terms of geographical location, age, and sex. It will also compare the different category of TB patients and their treatment outcome. The final analysis will show whether or not TB treatment at Moreguina Health Centre is effective by analyzing the results of the cure rates and treatment success. Interesting patterns found in this study suggests a need for review of TB control measures and some problematic recording and reporting routines.

63. THE MOREGUINA EXPERIENCE: WHAT CAN WE LEARN?

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Background
The history of public-private partnerships in health care in PNG is rich in experiences from rural areas and enclaves, but given the diversity of contexts, there is a need for means of analysis of different situations.

Aims
This study was carried out to assess the partnership between the private companies buying and processing rubber from the Cloudy Bay area and the Moreguina Health Center, aiming to propose an explanatory model to understand the relationship between this State-run rural health service and the local private enterprises.

Methodology
This is a case study, which drew from participant observation, interviews and analysis of documents and archives.

Results
A critical analysis suggests that the current struggle of maintaining rubber production whilst meeting other basic needs of the populace, experienced by the local society, has an impact both at the health service delivery and the viability of a sustainable business environment. Strategic planning and regulatory activities have not considered the effects of the local dynamics of competing businesses, and people’s perception of how competition among the companies would affect the development of public-private partnerships in health care and other social services. A model has been then proposed to understand this particular experience, to be compared with other cases in the country.
64. THE RELIABILITY OF IMMUNISATION COVERAGE RECORDING AND REPORTING FOR CHILDREN LESS THAN 1 YEAR FROM 2004 – 2008 FOR MOREGUINA SUBDISTRICT

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Background

Immunization coverage data keeping is essential in order to provide sufficient health care in Papua New Guinea. Therefore there has to be a correct reliable working data mutually used by the various health centres and their provincial health offices to effectively serve their people. Although it is known that the records for each District Health Centre in Papua New Guinea are sent to their respective Provincial Health offices for compiling, there has not been a proper assessment of the reliability of record keeping in terms of the immunization coverage. The Moreguina Sub-district health Centre is a classic example of a district health centre which keeps its own immunization records separate from the provincial records.

Aims

The aim of the study is to asses the reliability of immunization coverage record keeping and reporting for children less than one year from 2004 – 2008 for Moreguina Sub-district, Abau, CP; and to determine its impact on the overall Immunization coverage for Central Province and PNG as a whole in terms of its similitude to other districts in the country.

Methodology

Data was obtained from the Child and School Health Daily Summaries tallies for Moreguina Health Centre from 2004-2008. Updated Information was also collected from The Provincial Health Office on the immunization raw data as well as the coverage data. All information was organized and compared as means of critical analysis of their quality and reliability.

Results

Both sources of data were found to not match and the information generated by different methods implied, for some cases, significant differences in meaning. In this presentation, we discuss the disparities found between the immunization coverage local records and the coverage data report by the Central Provincial Health Office, and the consequences of such discrepancies. These results support the discussion on whether changes in population figures or calculation rates affect the overall immunization coverage recording.

65. ALCOHOL RELATED VIOLENCE IN MOREGUINA, CENTRAL PROVINCE

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Background

The majority of people living in a community, family or group in a Papua New Guinean setting claim Alcohol to be responsible for violence in the family and community, motor vehicle accidents and property damage, financial problems, child abuse, loss of human resource and workforce, criminal activities, mental and other medical conditions, other law and order problems and there are many more to it, and the male gender being over-represented in these events as perpetrators. Few information is available rural settings in PNG.

Aims

Therefore, a cross-sectional study was carried out at Moreguina in the Abau District of Central Province, PNG to investigate contributing factors to Alcohol-Related Violence among male alcohol drinkers aged 16-40 years in that area, aimed to:

- Identify which of the Contributing factors to Alcohol-Related Violence can be reduced, prevented and stopped.
- Identify the age group of males who are commonly involved in alcohol-related violence so that awareness can be targeted at that age group.

Methodology

A survey questionnaire was designed based on literature review highlighting contributing factors to alcohol-related violence, also factors which enhance and promote the consumption of alcohol.

The interviews were carried out in the outpatient area of the Moreguina Health Centre when males aged 16-40 years came in to receive treatment for their medical conditions. Most of the interviews were carried out in the market area, the sports field and Domara Rubber Block were youths and other male figures were present. Verbal Consent was obtained before the interviews. Data collected was taken back to School of Medicine and Health Sciences and Epi-Info Software program was used to analyze the data.

Results

The description of the economic chains of production and distribution of alcohol in this rural setting provides a picture of consumption patterns observed among young males. The alcohol behavior observed is correlated with demographic profile and with self-reported alcohol-related
Public Private Partnership in Health Care

violence events. A whole spectrum of available alcohol beverage types, along with an analysis of other determinants of violent events reported by the research participants proved to constitute a much more complex system that is in place in rural settings compared to urban areas, informing on different ways of reducing, preventing and stopping some of these contributing factors which potentiate and enhance Alcohol-Related Violence in Moreguina, Abau District of Central Province, Papua New Guinea.

66. MULTI-MEDIA MEDICAL EDUCATION IN PATHOLOGY

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Background

A new concept haematology curriculum was developed utilising the principles of problem based and student centred learning. This model of learning, using artistic and creative expression provided a novel context for the content of haematological knowledge during the haematology elective period October- November 2008. The projects were chosen to accentuate the development of personal and team skills within the sphere of self learning (domain five) and professional skills (domain three) of the Medical School curriculum.

Methodology

MBBS students in years two and three, who chose to take their two week elective study in haematology, were allocated into two working groups. Each group made a selection from a range of topics, to be their focus for the two week program of study. The groups were then given all the technology required to produce a DVD of their subject of interest, and assisted by the media department at UPNG main campus. The groups both edited and produced DVD’s using appropriate software and technology. The lecturer student relationship was one of facilitation. Qualitative feedback was undertaken by self response open style questions with written/verbal documentation.

Results

Both groups edited and produced DVD’s, entitled “The Full Blood Examination; from patient to interpretation” (MBBS 2) and “Blood Transfusion at Port Moresby General Hospital” (MBBS 3). Qualitative feedback suggested a high degree of accomplishment and enjoyment with the program. The two DVD’s that were produced have now been used for current MBBS 2 and 3 learning.

Discussion

With student centredness and the use of novel creative technology in the Haematology curriculum, the creation of new expressions of learning was enabled. This has been experienced by the students participating, as an enjoyable mode of learning that will provide a sustainable resource for other years of the MBBS course.

This validation will make it an integral part of the haematology curriculum in the future. The opportunity is present to expand this paradigm to other elements of the pathology curriculum, and to other disciplines, using other varied technologies such as the internet and artistic expressions such as theatrical productions in a diverse set of settings for health education and outreach beyond the Medical School.

67. THE NEW GUINEA SMALL-EYED SNAKE (MICROPECHIS IKAHEKA): A CASE STUDY IN HOW BASIC RESEARCH INTO VENOM COMPOSITION IMPROVES OUR UNDERSTANDING OF CLINICAL SYNDROMES OF ENVENOMING, AND PROVIDES INSIGHTS INTO ANTIVENOM SUITABILITY

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Papua New Guinea’s rich biodiversity (flora and fauna) plays host to some of the most venomous snakes in the world. Many of these are colonists from Australia, but one endemic species, the New Guinea small-eyed snake (Micropechis Ikaheka) is a common cause of envenoming, particularly north of the central Highlands. Comparatively little is known about the venom of this large, colourful snake. As part of a project to develop basic research capacity in the field of toxinology, we have undertaken a proteomic and immunological study of the venom of this snake with the objectives of improving our understanding of the toxins that cause the major clinical effects in envenomed, and to investigate the potential of using monovalent antivenoms in treatment of Micropechis ikaheka envenoming in PNG.

Venoms were obtained from captive M. Ikaheka at the University of PNG, and a pair of venom glands were removed from a euthanized specimen. 2-dimensional PAGE revealed more than 70 proteins spots, and mass spectrometry enabled many of these to be putatively
identified. RNA isolated from M. Ikaheka venom glands was used to create a cDNA library which was then probed using PCR and molecular biology techniques to amplify specific toxin encoding genes and then insert these into plasmid vectors to express the coded peptides, which were then sequenced and identified. Immunoblotting studies of 1D PAGE separated toxins using available CSL antivenoms suggested that both tiger snake and black snake antivenoms bind to major lethal toxins in the venom. Even long-expired antivenoms bound strongly to some of the M. Ikaheka venom toxins.

Several long-and-short-chain postsynaptic neurotoxin homologues, phospholipases A2, CRISP toxins, Vespryns, a serine protease and the metalloproteinase, Mikarin were identified during this study, along with a large number of other toxins that are subject to further characterization. The results of the ongoing work will enable us to develop a much more detailed understanding of the mechanisms responsible for clinical effects seen in M. Ikaheka envenoming, and will guide the design of an upcoming prospective clinical study in Papua New Guinea. The success of the research and training partnership between our institutions is a good model for other collaborations involving developing and developed nations aimed at tackling snakebite problems.

68. PRELIMINARY FINDINGS OF INFLUENZA VIRAL ACTIVITY IN PAPUA NEW GUINEA

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Background

Influenzae (Flu) viruses have caused major global disease pandemics in the past. Given their pandemic potential, the recent global outbreak events with the avian and swine flu viruses emphasize a need to be vigilant with surveillance and reporting activities. In 2007, the NDOH in Papua New Guinea (PNG), in collaboration with the World Health Organization, initiated a country-wide national surveillance programme to detect and report circulating influenzae viral strains including the avian strain, H5N1, for a timely intervention. We report here the preliminary virological findings between November 2007 and June 2009.

Methods

Seven sentinel sites were selected including Vanimo, Daru, Kiunga, Madang, Goroka and Port Moresby to collect and send nasopharyngeal and/or nasal swab specimens from patients presenting with influenza-like illnesses or sever acute respiratory infection to the National Influenza Centre laboratory at the Papua New Guinea Institute of Medical Research (PNGIMR) for analysis. To date, 146 samples from Vanimo Hospital (mean age = 4.3 years; range = <1 y-70 y; M/F sex ratio = 1.3), 49 samples from PNGIMR clinic in Goroka, EHP (children ≥2 years) and 8 samples from the Port Moresby General Hospital (adults above 30 years) were received. Influenza A and B viruses and subtypes for Influenza A virus, namely seasonal H1, H3, N1 and avian H5 strains were investigated using reverse transcriptase polymerase chain reaction. Further confirmation and characterization of detected viruses was done in Australia at the Melbourne-based WHO Collaborative Centre for Influenza.

Results

Both Influenza A and B viruses were detected. Cumulative prevalence of Influenza A and B viruses in Vanimo, EHP and POM respectively were: 26.7%, 53.1% and 85.5%. The detected subtypes of Influenza A virus from Vanimo included H1, H3 and H1N1. H1 and H3 were also detected in Goroka and H3 in sample from PMGH. These could not be characterized further due either to unavailability of specific primers for N subtypes or failure to isolate in culture. Influenza B virus was also detected in Vanimo and Goroka, but not among the samples analyzed so far from PMGH. Flu B from Goroka (1/07) was further characterized to be related to B Yamagata/16/88 lineage. Flu B from Vanimo (04/08) was determined to be B/Malaysia/2506/2004-like.

Conclusion

Seasonal Human Influenza viruses A and B continue to circulate in PNG. Our data indicates that everyone is at risk. Heightened awareness and further strengthening of capacities is required to be able to detect and report outbreaks in a timely manner.

69. GENETIC VARIATIONS IN INNATE AND ADAPTIVE IMMUNE GENES AFFECT THE AGE OF FIRST ACUTE LOWER RESPIRATORY INFECTION (ALRI) AND THE NUMBER OF ALRIS IN THE FIRST 18 MONTHS OF LIFE IN CHILDREN FROM THE HIGHLANDS OF PAPUA NEW GUINEA

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Introduction

Infants from the highlands of PNG experience early onset of dense upper respiratory tract bacterial carriage leading to one of the highest childhood mortality rates due to ALRIs in the world (50% of all infant deaths aged <1yr). Statistical estimates in twin studies suggest that genetic factors may contribute 57 - 62% to the risk of bacterial infection. To date, there has been little systematic evaluation of the genetics of immune pathways on the susceptibility to ALRIs in children. We hypothesised that variations in genes involved in the innate immune response, including several toll-like receptors (TLR), MyD88-adapter-like (MAL) and CD14, as well as genes involved in the adaptive immune response including several interleukins (IL), interferon gamma (IFNγ) and IFNγ receptor, would be associated with earlier and increased ALRI incidence in the first 18mths of life in children participating in the neonatal pneumococcal conjugate vaccine (NPCV) trial.

Methods

Infants (n=319) were recruited at birth and were under passive surveillance for ALRI to 18mths of age. DNA was extracted from blood for 283 children. TLR1 (C-2299T, T-2192C), Ser248Asn) TLR2 (A-16934T, A-15607G, T597C) TLR3 (Asn284Ile, Leu412Phe) TLR4 (A-6687G, T-5724C) TLR6 (T-2078A, Pro249Ser) TLR7 (Leu111Gln) TLR8 (A-4824G) TLR9 (T-2871C) TLR10 (G1032T, Val775ile) MAL (Ser180Leu) and CD14 (A-1619G, C-550T, T-159C) IL12 (-2299T, -2192C), Ser248Asn) IL13 (-2299T, -2192C), Ser248Asn) IFNγ (A874T) IFNγR1 (C-611T, C-56T) IL4 (C-5897, G2979T) IL4Rα (Val50ile, Arg551Gln) IL8 (T-251A, C781T) IL10 (G-1082A, C-592A) and IL13 (G-1112A, Arg130Gln) were genotyped using Sequenom MassARRAY. Kaplan-Meier survival, Cox proportional hazard and multiple regression models (adjusted for gender and follow-up time) were used to identify associations between genotype and age of first ALRI and number of ALRI episodes over the 18 month follow-up.

Results

TLR1 (-2299T, -2192C), TLR3 (284Ile), TLR6 (-2078A, 249Ser), TLR7 (11 Leu), TLR10 (1032T, 775 Val) & IFNγ-R1 (-611A) alleles were absent or very rare in the NPCV study children. Children with TLR2 -16934A/A or -15607A/A had 1.59 or 1.4 fold (p<0.01) more ALRIs than children with other genotypes. Children with CD14 -550C/C had 6.6mths earlier median age of first moderate/severe ALRI (p=0.063), compared to those with CT and TT. No other innate immune gene polymorphisms were associated with the incidence of ALRIs. Children with IL4R 551Arg/Arg had 3.4mths (p=0.039) earlier median age of first ALRI and 1.85 fold (p=0.023) increased number of ALRIs in their first 18mths, compared to those with Arg/Gln and Gln/Gln genotypes. Children with the IL10 -1082A/592A haplotype had 3.0mths (p=0.047) earlier median age of first ALRI and 1.4 fold (p=0.023) increased number of ALRIs compared to those with A/C and C/C haplotypes. There was also evidence that children with IL13 130 Gln/Gln had a later median age of first ALRI compared to those with other IL13 130 genotypes.

Conclusion

Particular innate and adaptive immune gene alleles or genotypes may contribute to children's survival or susceptibility to ALRIs in PNG.

70. CAREGIVER PRACTICES AND THEIR PROTECTIVE ASSOCIATIONS TO STUNTING IN CHILDREN UNDER 5 IN EASTERN HIGHLANDS AND MADANG

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Background

Moderate to severe malnutrition affects 27% of children in PNG and leads to stunting. A Household and Community Practices Survey (HCPS) funded by UNICEF was carried out with the Integrated Management of Childhood Illnesses (IMCI) in Eastern Highlands (EHP) and Madang Provinces in 2001 to identifying key behaviour and practices of care givers of children less than 5 years.

Aims

To determine protective association between stunting and key household practices among caregivers of children aged 6 to 59 months and to determine the nutritional status of children aged 0 to 59 months in both provinces.

Methods

The caregivers of 683 children from EHP (338) and Madang Provinces (345) were part of a cross sectional survey that included 8 modules representing common caregiver practices, namely breastfeeding, growth, immunization, malaria, care of the mother, nutrition, care of the sick child and hygiene and sanitation. Univariate and multivariate logistic regression analysis under the WHO Growth Standard were performed on selected caregiver practices with stunting as an outcome variable in the children. Using the z-score of WHO Growth Standards of less than -2 Standard Deviations (SD), outcomes of underweight (WAZ), stunting (HAZ) and wasting (WHZ) were derived.

Result
Children in EHP were less likely to be stunted if they completed the full immunisation schedule (OR: 0.4, 95% C.I: 0.18-0.84, p=0.016). The presence of vitamins (OR: 0.4, 95% C.I: 0.23-0.78, p=0.006) in the diet and the proper disposal of rubbish (OR: 0.3, 95% C.I: 0.11-0.95, p=0.0041) in Madang children had a protective effect on stunting. Male children in Madang were 1.6 times more likely than females to be stunted (OR: 1.6, 95% C.I: 1.0-2.6, p=0.04). The prevalence of underweight in EHP and Madang Province was 29% and 33%, respectively, whereas that of stunting was 59% in EHP and 49% in Madang and wasting 14% in EHP and 22% in Madang.

Conclusion

The protective association of immunization, proper nutrition and proper disposal of rubbish to stunting provides evidence of the favourable household and community practices within EHP and Madang Province. The prevalence of wasting was found to be high in Madang children.

71. MATERNALLY DERIVED IGG RESPONSES TO PNEUMOLYSIN AND PNEUMOCOCCAL SURFACE PROTEIN A HAVE INVERSE EFFECTS ON RISK FOR EARLY UPPER RESPIRATORY TRACT PNEUMOCOCCAL CARRIAGE IN HIGH-RISK INFANTS IN PAPUA NEW GUINEA

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Introduction

The need for serotype-independent pneumococcal vaccines has led to the testing of pneumococcal protein antigens as potential vaccine strategies. However, little is known on immune responses to these protein antigens, particularly in high-risk populations where such vaccines will be of most benefit.

Objective

To study the role of maternally derived natural antibodies to pneumolysin (Ply) and pneumococcal surface protein A (PspA) in relation to early nasopharyngeal pneumococcal carriage in PNG infants.

Methods

Plasma Ply- and PspA-IgG titres were measured in 89 mother-cord pairs and 50 Australian mothers using an enzyme-linked immunosorbent assay. Nasopharyngeal swabs were collected from PNG mothers at time of delivery and one month post-partum, and weekly during the first month of life from their children to determine carriage. Non-parametric and Cox regression analyses were used to determine associations between antibody responses and risk for early infant carriage.

Results

Anti-Ply and anti-PspA IgG were strongly correlated in the PNG mother-cord pairs but were on average 7-fold and 2-fold lower in cords than in mothers, respectively. Ply- and PspA-IgG titres were higher in PNG than Australian mothers (p < 0.05). Seventy-six percent of PNG infants carried pneumococci at least once during the first month of life (median age of onset, 18 days). High PNG maternal (HR, 0.74 [95% CI 0.53-1.02], p < 0.05) and cord (HR, 0.72 [0.52-1.00], p < 0.05) Ply-IgG titles delayed onset of first infant carriage while the inverse effect was found for high PspA-IgG maternal (HR, 1.58 [0.98-2.53], p = 0.059) and cord titles (HR, 1.57 [1.03-2.40], p < 0.05) after adjusting for maternal age and carriage at time of delivery. Maternal carriage at time of delivery also increased early infant carriage risk (HR, 2.03 [1.03-4.00], p < 0.05).

Conclusions

Ply- and PspA-specific IgG responses are higher in mothers living in high-risk areas, and are effectively transferred from mother to child. Protective effect of maternal antibodies against early carriage is limited in PNG infants, probably due to the presence of risk factors including maternal carriage at time of delivery. Maternal pneumococcal vaccination could be an appropriate strategy to delay the onset of early infant carriage, and prevent maternal carriage.

72. HIGH RATE OF ROTAVIRUS DIARRHOEA AMONG CHILDREN AT GOROKA GENERAL HOSPITAL PAEDIATRIC WARD

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Background and Rationale

Past reports suggest that Rotavirus is a significant cause of acute diarrhoea in Papua New Guinea (PNG). Rotavirus infection can be prevented by vaccine but comprehensive clinical and epidemiological data are required to drive this treatment strategy. Here, we present results from an ongoing survey to determine the role of Rotavirus in the
aetiology of acute watery diarrhoea in young children admitted to the Goroka General Hospital from May 2008 to April 2009.

Methods

To date, 360 eligible children have been included: 57% males and 43% females (mean age of 11.2 ± 8.9 months, range 0-53 months). Stool specimens were obtained from acute gastroenteritis cases and analysed using a commercial ELISA kit to detect Rotavirus group-specific antigens. Corresponding socio-demographic and clinical data were also collected to investigate possible associations. Statistical analyses were done using Stata 8.1.

Results

Eighty-nine children (25%) were positive for Rotavirus, with more males (63%) infected, although this difference was not statistically significant ($\chi^2= 0.024; P=0.88$). Two of the 26 (2%) children who died during the study were Rotavirus positive. 41% of cases occurred in the first two years of life peaking at 12 months of age with 67% of positive cases occurring in children <12 months old, and 94% in children <24 months old. No association was found with age overall ($\chi^2= 8.699; P=0.19$), or when the observed incidence was stratified into the first 24 months versus 25+ months ($\chi^2=0.949; P=0.33$). Rotavirus distribution showed distinct peak incidence (52%) in May 2008, which declined to 8% in April 2009 ($\chi^2=39.78; P < 0.001$).

Conclusions

Rotavirus diarrhea is a significant cause of hospital admission among children <2 years. The low mortality confirms past observations in PNG, possibly highlights the benefit of good breast-feeding practices. Observed seasonality of the infection provides a potential intervention through awareness and other public health measures whilst vaccination is being considered.

73. HIGH EXPOSURE TO INDOOR AIR POLLUTANTS IN TRADITIONAL HOUSEHOLDS IN HIGHLAND PAPUA NEW GUINEA

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Background

Indoor air pollution from biomass smoke has been associated with acute respiratory illness (ALRI), which is a major public health problem in children in the highlands of Papua New Guinea. As part of a Neonatal Immunology Study, we are determining indoor air quality in households in the highlands in relation to immune development in early life and risks of early childhood ALRI.

Methodology

Pregnant women have been recruited in Goroka Town, surrounding villages and Asaro valley since August 2008. Particulate Matter (PM₁₀) is measured using an Aerosol Monitor: DustTrak™, with two measurements per household: one in the wet and one in the dry season. Questionnaire Interviews regarding socioeconomic status and type of housing and fuel use are being collected. TrackPro Program and File Maker Pro 7 are used for data management.

Results

So far 76 houses have been measured, of which 28% are permanent, 28% semi-permanent and 44% traditional styles. Traditional houses have no windows (100%), no chimneys (100%) and have smaller doors (75%). Fifty percents of all the households cook inside the houses and two thirds uses firewood as a main fuel source. An average of ongoing-fire is 4.9 hours/day. During periods of high activity, significantly higher levels of PM exposure are measured in traditional (mean is 0.85 mg/m³) compared to semi-permanent (mean is 0.25 mg/m³, p = 0.024) and permanent houses (mean is 0.02 mg/m³, p < 0.001). These differences in indoor air pollution also occur during periods of low activity.

Conclusion

Highlanders living in traditional houses are exposed to extremely high levels of PM₁₀ exposure. We hypothesize that high levels of indoor air pollution may contribute to high rates of ALRI in infants in the Highlands by affecting the physiology of infants’ respiratory tracts as well as immune development.

74. IMMUNOGENICITY OF PNEUMOCOCCAL POLYSACCHARIDE VACCINE (PPV) IN INFANTS PRIMED WITH PNEUMOCOCCAL CONJUGATE VACCINE (PCV) IN PAPUA NEW GUINEA

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Public Private Partnership in Health Care

**Background**

Children in Papua New Guinea are at high risk of diseases caused by *Streptococcus pneumoniae*, particularly pneumonia in early infancy. Pneumococcal conjugate vaccine (PCV) is safe and immunogenic when given in early infancy, but lacks coverage against important disease causing serotypes. Pneumococcal polysaccharide vaccine (PPV) is immunogenic for important serotypes from 6 months of age in PNG. We investigate whether PPV at 9 months of age is immunogenic following PCV in early infancy.

**Method**

Between May 2005 and March 2009, we randomised 323 infants who received 7vPCV at 0-1-2 months, 1-2-3 months of age or no PCV (controls). All infants then received PPV at age 9 months. Serotype-specific IgG for 7vPCV serotypes (VT) and 2, 5 and 7F were measured at 9, 10 and 18 months of age. Geometric mean concentrations (GMCs) and proportion of children with IgG $\geq 0.35$ug/mL were calculated.

**Results**

Data were available from 164 infants to date. The GMCs and proportion with IgG $\geq 0.35$ug/mL ($53-100\%$) were significantly higher in PCV-primed children at 9 months compared to controls for all VT except 19F. Post-PPV at age 10 months, 87-100% of PCV-primed infants achieved VT IgG $\geq 0.35$ug/mL compared to 50-100% of controls with significantly higher GMCs for all VT (mean 4.7-fold GMC rise versus 2.4-fold in controls). By age 18 months (9 months post-PPV) VT IgG declined with 64 to 100% VT IgG $\geq 35$ug/mL in PCV-primed children. For serotypes 2, 5 and 7F, PPV induced 12.4-, 2.8- and 3.5-fold GMC increases and 95.8%, 98.5%, and 90% $\geq 0.35$ug/mL respectively and remained high at 18 months of age.

**Conclusions**

This preliminary data shows that PPV is immunogenic in PNG infants following PCV in infancy with immunologic priming for VT and significant responses for important non-PCV serotypes. Further evaluation of PPV following PCV in high risk infants is warranted.

75. **SURVEY OF NON COMMUNICABLE DISEASES: LUNG HEALTH AND OBESITY IN HIGHLAND PAPUA NEW GUINEA**

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**Background**

Burden of non-communicable diseases is rising globally. In this study, we presented the latest prevalence rates of a number of important non-communicable diseases and their risk factors in the PNG Highland population.

**Method**

The survey was conducted in August 2007 covered a total of 650 people (age 6-85 years old) in 5 Asaro villages. Anthropometric characteristics were measure for obesity (body mass index $\geq 30$ kg/m$^2$). Spirometer (EasyOne$^\circledR$) was used to test lung function of participants aged $\geq 40$ years old. A ratio of the FVE1 over FVC below 0.7 is an indicator of lung health problem. Urine was collected to determine Isoprospanes, biomarker for Indoor air Pollution exposure. A questionnaire (exposure history and clinical presentation) was conducted. We used File-maker pro for data management and Stata V.8 for data analysis.

**Results**

Of 650 people, we found 5.4% Obesity, 20% overweight. The proportion of Obesity and overweight for women are higher than men as 7.6% vs 20% and 3.2% vs 18.9%, respectively ($P=0.07$). Lung health was tested with 102 adults, 41% had the FEV1/FVC less than 0.7; more male (47%) than female groups (35%). Significant factors associated to higher risk to lung health problem are: current smoker (OR: 3.7, $P=0.013$); older than 50 years (OR: 2.65, $P=0.04$); passive smoker (OR: 2.71, $P=0.02$); exposed to dust from work (OR: 3, $P=0.012$); over 10 years of dust exposure (OR: 3, $P=0.02$) and clinical presentation as loose cough (OR: 3.75, $P=0.002$), sputum (OR: 3.44, $P=0.03$), shortness of breath (OR: 3.29, $P=0.007$), waking up due to trouble breathing (OR: 5, $P=0.03$). Being overweight is of lower risk to lung health problem (OR 0.22, $P=0.006$).

**Conclusion**

We documented a high prevalence of non-communicable diseases and their risk factors among PNG highlanders. Lung health problem group will get medical attention for proper diagnosis and treatment. Preventive interventions should be implemented to combat the growing public health problems in PNG.

76. **MEDICAL AND PSYCHOSOCIAL CARE TO SURVIVORS OF DOMESTIC AND SEXUAL VIOLENCE IN LAE**

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Emerging high levels of Domestic and Sexual Violence in Papua New Guinea require services providing...
77. PARI VILLAGE HOSPITAL RECORDS AT PORT MORESBY GENERAL HOSPITAL: A COMPARISON OF EARLIER AND RECENT DECADES

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Background

A study of the causes of hospital admissions of Pari villagers between 1960-1974 found that: i) young children and women of childbearing age were the two main age groups, ii) infectious diseases were the predominant cause of admission, iii) there was an absence of non communicable diseases such as diabetes and cardiovascular disease.

Objective

To compare the current and previous disease patterns in hospitalized Pari residents.

Design

Descriptive study

78. SUCCESSFUL DEVELOPMENT OF A NEW EQUINE WHOLE IGC MONOVALENT ANTIVENOM FOR USE IN THE TREATMENT OF BITES BY THE PAPUA TAIPAN (OXYURANUS SCUTELLATUS)

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Background

The Papuan taipan (Oxyuranus scutellatus) is responsible for more than 90% of all cases of envenoming in south-
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eastern Papua New Guinea, and the cost of treatment with available antivenoms manufactured in Australia currently exceeds K45000 per vial. Analysis of the incidence of bites by taipans have resulted in needs estimate of at least 700-100 vials of appropriate antivenom each year, yet much less than this is purchased by the National Department of Health because it cannot afford this many vials at the current prices.

With global warning, and the expansion of agricultural practices such as palm oil production, forestry and rice growing, the incidence of envenoming by Papuan taipans will undoubtedly increase over coming years. If patients are not to be left to die, then we must take action to enable Papua New Guinea to control the production of antivenom to meet the present and future needs.

Methods
We have developed a new equine whole IgG monovalent antivenom against venom from Papuan taipans maintained in the research collection at the University of Papua New Guinea. This new product “Papuan taipan monovalent IgG antivenom ICP” was raised by immunising horses maintained at the Institute Clodomiro Picado (Costa Rica) with venom and harvesting plasma for fractionation to obtain a whole IgG preparation. Non-IgG plasma proteins were precipitated from the antisera by the addition of caprylic acid at acidic pH, and after a filtration step, the antisera was submitted to diafiltration, followed by formulation, sterile filtration and dispensing in 50 mL glass vials.

Trials and Results
Preclinical testing in mice demonstrated that the new antivenom had a potency of 5.86 mg venom/mL antivenom, compared to a sample of CSL antivenom which had a potency of 4.98% venom/mL antivenom.

Horses are now being injected with booster doses of venom in order to foster the immune response so that a pilot hatch of antivenom can be prepared, submitted to routine quality control followed by preclinical assessment of the neutralization of specific neurotoxic, procoagulant, myotoxic and platelet aggregating activities of the venom from Papua New Guinean Oxyuranus scutellatus. After passing all these preclinical stages, the antivenom will then be ready to be shipped to Papua New Guinea for clinical evaluation of dose, safety and efficacy.

Conclusions and Recommendations
We therefore propose to seek both ethical approval and funding for a randomized, control trial of this new antivenom (against current taipan antivenom) in the second half of 2010, and hope that local doctors will embrace participation in the important trial.

Our new IgG antivenom is likely to have a final production price of K600-650, and will not only produce significant cost savings to government, but through wider availability and greater stability, save many thousands of lives in years to come.

79. PRIVATE-PUBLIC PARTNERSHIP SIL AND HEALTH CARE IN PNG

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Background
SIL is a non-governmental organization dedicated to translation and literacy, which has been active in Papua New Guinea since 1957. In the past, the contact between SIL and the health care profession has been as village-based translators help with health care needs in their areas and through an outpatient clinic located at the SIL centre at Ukarumpa.

More recently, SIL has had three new areas of private-public partnership in the health care field:

1. Development of HIV/AIDS awareness materials and translation of the materials into tribal languages. The available materials include posters, literacy booklets and a DVD. Samples of these materials will be presented and examples of uses described.

2. Founding and encouragement of a community Health Board. This board originated in a group of local surveyors recruited for a study of immunization rates in the SIL Clinic maternal-child patrol area. The board now occupies the niche of community health volunteers, doing community-based awareness across a wide spectrum of health issues, encouraging infant immunization and interacting with district and area health authorities over health care needs in the area. The Board composition and activities will be presented along with sample plans of the monthly community awareness training sessions.

3. Dental care. SIL’s dentistry program for expatriates has recently been expanded into a “Valley Dental Program” which caters to those with dental care needs in the SIL catchment area. Some examples of care and off-shore training will be presented.

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Introduction

We studied the clinical course of snake bite patients presenting to the Emergency Department at Port Moresby General Hospital between January 2006 and December 2008.

Methodology

In order to assess restoration of haemostasis, and to investigate if envenoming caused release from myocardial tissue of troponin I and other markers of cardiac damage, blood samples were taken from 60 patients (a) immediately before administration of antivenom, and (b) 6 hours after antivenom had been given. Renal function was determined by estimation of glomerular filtration rate (eGFR) from routine UEC data and compared to a standard scale to determine the severity of renal impairment. Platelet counts from FBE results were compared to renal impairment date to determine if platelet fragment deposition in kidney nephrules was a factor in the development of renal impairment. CK and LDH were used to identify rhabdomyolysis.

Results

Data from 98 male (62.8%) and 58 female (37.2%) patients were reviewed. There were 47 (30.1%) paediatric admissions (2-15 years). There were 46 patients (29.5%) from NCD and 110 (70.5%) rural patients from Central Province. Nine patients (5.7%) died, but 8 of these deaths were the result of “medical misadventure”, rather than effects directly attributable to snake venom.

Discussions

Analysis of serial coagulation test data showed significant improvements after antivenom, in PT, APTT, fibrinogen and ETP, although fibrinogen levels were still lower than normal significant increases in factors V and VII, while factor II was unchanged, and factors VII and X decreased further. Endogenous thrombin potential (ETP) improved significantly, suggesting that ability to generate thrombin restored quickly with antivenom treatment, although the low fibrinogen levels indicate that the ability to form viable clots may still be reduced for many hours. Renal function was impaired (eGFR <90) in 42.5% of patients for whom data was available, and in 11.5% the eGFR was <30 indicating renal failure. Two patients with very severe renal failure due to microangiopathic haemolytic anaemia (MAHA) died, but one of these deaths was due to potassium overdose, and the other was due to a combination of medical failures. The majority of patients had non-oliguric renal impairment without thrombocytopaenia or rhabdomyolysis. Monitoring creatinine thus appears more important as an early means of detecting renal failure then fluid balance monitoring alone. Troponin I was elevated in 22/58 (37.9%) patients for whom serial data was available. The highest recorded result was 76.9 µg/L in a 15 year old female patient. Troponin I increases were mirrored by elevation of AST, CK and LDH levels. ECG data was available for only a few patients, and while some changes were evident and consistently observed, the actual underlying cause is unknown although we hypothesize that either pre-hospital thrombosis or hypozia may produce myocardial ischaemia rather than any direct venom effect.

81. TELEMEDICINE SERVICES- A USEFUL DIAGNOSTIC MODALITY FOR PAPUA NEW GUINEA

Menzies J

JTA International, Brisbane, Australia.

Telemedicine services are rapidly being implemented in all countries. They tend to be either of a ‘store and forward’ or a ‘real time’ format. Store and forward services are usually based on simple techniques and are relatively inexpensive to run. Real time services rely on more complex technology, are faster and interactive but are more expensive. When considering the implementation of a service, many individual clinical practices or medical organisations tend to chose only one type of service for their clinical needs. Unfortunately, due to evolving clinical needs, sole application choices often do not continue to meet the clinical needs of a practice. An alternative is to consider a two mode system that offers flexibility for emerging clinical needs.

A two mode system was introduced at Tabubil Hospital in 2005. One system was based on a store and forward model using email and attached jpeg images of patients, x-rays or other investigational results. The second system was based on real time transmission of data transfer across an internet line using televideo conferencing.

This paper reviews the advantages and disadvantages of both formats of telemedicine in PNG and similar countries. It concludes that there is a role for both. The paper also includes some initial data analysis of how the store and forward telemedicine consultation has impacted upon patient outcomes during a two year study period at Tabubil Hospital.
82. INTEGRATION OF TRADITIONAL MEDICINE INTO PNG NATIONAL HEALTH SYSTEM – THE JOURNEY SO FAR

Rai P

School of Medicine and Health Sciences, UPNG

In line with the global strategy on traditional medicine of the World Health Organization, the Government of PNG approved a National Policy on Traditional Medicine (TRM Policy) in March 2007. The Policy contains general guidelines for developing traditional medicine in PNG and incorporating it into the primary health care system. As the Policy moves into implementation phase it is imperative that a suitable mechanism for integration of traditional medicine into general health services system is developed. Integration of traditional medicine will not only bring benefits to patients, but will also ensure safety and proper use. Consistent with the TRM Policy objectives a series of measures have already been initiated and considerable progress achieved. These measures include survey and documentation of traditional medicine practices, training of traditional practitioners, establishing an electronic database on PNG traditional medicine, and opening a national register of traditional practitioners. While the potential of traditional medical practices to complement health care is undisputed, it is important that major challenges facing the development of traditional medicine in PNG are addressed. A model for an integrated health system incorporating traditional medicine as a component of community health care, and how the TRM Policy might be implemented on a broader scale at provincial and local level will be outlined in this presentation. The scope for public private partnership in development and promotion of traditional medicine will also be explored.

83. TAPPING INTO A GOLDMINE OF HUMAN RESOURCE FOR SEXUAL AND REPRODUCTIVE HEALTH

Riparip J

Marie Stopes International, PNG

To create a demand for and provide accurate sexual and reproductive health (SRH) information and high quality counselling and services remain a big challenge. As a partner of NDoH, Marie Stopes PNG is rising to the challenge by complementing NDoH efforts through its sustainable community-based service provider (CBSP) scheme.

Marie Stopes PNG is a social business whose mission is “Children by Choice, not by Chance” and whose philosophy is “Choices change Lives”. What is the CBSP scheme?

- Marie Stopes PNG recruits retired midwives, nurses, health extension officers and community health workers to create demand and provide selected SRH services to the community where they live.
- They are provided with re-training and regular refresher courses, equipment and supplies.
- They visit clients on a door-to-door basis.
- They organise clinical outreach, as called for.
- They charge a very reasonable service fee.

Why retired midwives, nurses, health extension officers and community health workers?

- They are experienced!
- At retirement, many go back to their village, many of them remote!
- Being health professionals, they continue to be physically vigorous and, generally, in good health!
- They are raring to continue being active in their profession!
- They do not mind earning a few Kina to supplement their pension!

How are they managed?

- Monthly, they come to a Marie Stopes PNG Centre for a meeting where they a) make a report and discuss issues and concerns b) to attend a “Learning Session” c) to turnover collected fees d) get their remuneration and e) be resupplied with medical supplies and IEC materials.
- Quarterly, they are randomly visited to ensure that they abide by NDoH approved protocols and Marie Stopes standards.

How is it sustainable?

- CBSPs are not employees, they are partners.
- For every client fee that they collect, they get a substantial share.
- Their services are promoted to the community.
- Marie Stopes PNG continues to add their menu of services depending on community needs.

At present: 2 in Port Moresby. 1 in Central Province, 3 in Western Highlands Province

84. THE IMPACT OF SMALL ARMS VIOLENCE IN BOUGAINVILLE DURING AND AFTER CONFLICT AND DISARMAMENT

Shotbolt P1, 2, Fargher S1, 2, Winnington A1

1The International Physicians for the Prevention of Nuclear War (New Zealand Branch)
2University of Auckland New Zealand
The Bougainville war was the longest and bloodiest violent conflict in the South Pacific since the end of World War II. Peace negotiations were brokered by the New Zealand Government in 1998, but by the time the conflict ended, 10% of the population of Bougainville or approximately 15,000 civilians had died. This project examined hospital-based injury data and trends to assess the impact of conflict mediation that followed the conflict, and more specifically the United Nations-supervised weapon disposal programme that ended in 2003 (n=3 hospitals, time period 1987 to 2008). In the absence of sustained disarmament the continued availability of weapons can lead to increased deaths and injuries that, in some cases, are only slightly reduced from that observed during a period of conflict. We hypothesised that the peace process would result in a reduction in rates of intentional injury (as measured by hospital data) and after the peace process there would be lower rates of intentional injury than in comparable settings in Papua New Guinea where tribal violence is poorly controlled (eg, in the Southern Highlands Province).

Results that assess the relative frequency of weapons-related injuries during and after periods of conflict and disarmament will be presented, and implications for further gun violence prevention discussed.

85. THE LATEST, EVIDENCE-BASED ADULT AND PAEDIATRIC SNAKEBITE MANAGEMENT GUIDELINES FOR PNG

Jensen S 1,2,3, Williams D 1,3,4

1 SMHS, UPNG
2 Emergency Department, PMGH
3 Australian Venom Research Unit, University of Melbourne, Parkville, Australia
4 Nossal Institute for Global Health, University of Melbourne, Parkville, Australia

Background

Snakebite is a significant health issue in Papua New Guinea (PNG), and throughout much of the tropical and developing world. However, it was only in March 2009 that “Snakebite” was finally added to the World Health Organisation (WHO) list of “Neglected Tropical Diseases” (NTD). Most members of the PNG health care community will have either been involved in the management of at least one case, or have had a family member or friend bitten by a snake. Not all nakebites in PNG result in envenomation, but among those that do, many still result in death. The causes of this adverse outcome are multiple. They include both a failure of community members to understand the optimal response to a snakebite, and also a failure by health care workers to be aware of, understand, and follow current guidelines. Dr Charles Campbell lived in PNG in the 1960s, when he developed snakebite research as a foundation for understanding the effects of snake venoms and the optimal management of snakebite patients. Since his time a number of research teams have contributed to knowledge in this area, but the new knowledge has not been widely distributed and little change to practices has occurred. The PNG Snakebite Research Project, a collaboration between the University of Papua New Guinea (UPNG) and the Australian Venom Research Unit (AVRU), commenced in 2004. This project has reviewed, retrospectively and prospectively, many aspects of snakebite, including the distribution of the various enomous species across the country, snakebite first aid education, many clinical aspects of the effects of various venoms, the ideal acute management of the snakebite patient, the incidence and management of complications of snakebite and snakebite education of health care workers.

Aim

The aim is to present the current, safe, effective, evidence-based approach to snakebite management.

Method

The current Paediatric Snakebite Management Guidelines, agreed upon by the country’s leading paediatricians several years ago, which are included in the latest version of the Paediatric Standard Treatment for Common Illnesses manual, will be presented. They form the basis for the Adult Snakebite Management Guidelines, requested 3 years ago for inclusion in the next edition of the Adult Standard Treatment for Common Illnesses manual. The 2 guidelines are virtually identical, and the minor differences will be reviewed. Changes from previous guidelines will be highlighted and explained. A revised Snakebite Observation Sheet and a Snakebite Admission proforma will also be presented. The guidelines have, since 2004, been taught at the bedside, in formal presentations at Grand Rounds and at previous Medical Symposia, as well as in the form of Snakebite Management Courses, run in several centres by the authors, and in 2 publications, the more recent one being “Venomous Bites and Stings in Papua New Guinea – a treatment guidelines for doctors and health workers”.

Results

The positive effect of the new Management Guidelines on patient outcomes will be presented. A case is presented for a pocket booklet guide, for more extensive, formalised education in snakebite at all health care worker levels, and for the formation of a specialist referral and advice group. The Guidelines will continue to evolve as more research yields new information.
Public Private Partnership in Health Care

1. THE RESULTS OF FIRST NATIONAL E-HEALTH SURVEY PERFORMED AT THE 44TH ANNUAL MEDICAL SYMPOSIUM, RABaul 2008

Albert N1, Garbett IK2, Nascimento RWF3, Morewaya J2, Fose S2, Abramova I1, Rooney PJ2

1Undergraduate Student, SMHS, UPNG
2Division of Pathology, SMHS, UPNG
3Division of Public Health, SMHS, UPNG

Background

Both the Government of Papua New Guinea and the National Department of Health have established strong commitments to utilise information communication technologies (ICT) to deliver innovative health service delivery. The School of Medicine and Health Sciences has done likewise with the implementation of a new ICT structure throughout Taurama campus which will enable, amongst many other projects, the Division of Pathology’s Collaborative Telepathology Network Project (CTNP). This survey was created to provide useful information for the feasibility of introducing the CTNP in a national telepathology network.

Methodology

A quantitative based survey using questionnaires was chosen as the method of data acquisition.

The questionnaire was designed with quantitative based questions including a Leichart scale for quantification of expressed agreement/disagreement. Data analysis was performed using Microsoft Excel software.

Results

200 questionnaires were return with a response rate of 50%. The survey revealed that respondents in all but Enga, Simbu and Central Provinces had access to internet at their workplace. Over 40.2% of respondents used dial up to access the internet, with 22.6% and 19.5% using wireless and satellite respectively. Interestingly 3.7% of respondents were using High Frequency radio to access the internet. The most popular internet service provider, with 33.8% of respondent share, was Datec, followed by Daltron at 24.1%. The usefulness of Telepathology was overwhelming, with 76.4% of respondents rating this technology as very or extremely useful. Similarly 64% felt that a histopathology result available through email would be useful.

Discussion

The survey demonstrates that with high internet availability nationally in health centres or hospitals and together with a strong agreement of the usefulness of telepathology by those health care workers surveyed, the implementation of CTNP is feasible.
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<tr>
<th>TIME</th>
<th>TOPIC</th>
<th>SPEAKER</th>
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<tbody>
<tr>
<td>08:00-08:15</td>
<td>Welcome &amp; Introduction</td>
<td>Dr David Mokela</td>
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<td></td>
<td>Opening Remarks</td>
<td>Mr Enoch Posnai, Director FHS</td>
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<tr>
<td>08:40</td>
<td>TB Treatment completion rate in children after intensive phase in Wewak hospital</td>
<td>Dr Joseph Ande (DCH – Wewak)</td>
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<tr>
<td>09:00</td>
<td>Study on the prevalence of parent to child transmission of HIV in Goroka Base Hospital</td>
<td>Dr Paul Wari (DCH-Goroka)</td>
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<tr>
<td>09:20</td>
<td>Infant Feeding routines &amp; practices in working mothers in the public service and private companies in urban Lae</td>
<td>Dr Fiona Kupe (DCH- Angau, Lae)</td>
</tr>
<tr>
<td>09:40</td>
<td>Use of Plumpinut in children with malnutrition in Angau Memorial Hospital.</td>
<td>Dr Stanley Hanap (DCH- Angau, Lae)</td>
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<tr>
<td>10:00</td>
<td>Morning Tea Break</td>
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<tr>
<td>10:20</td>
<td>Neonatal sepsis in the children's wards of Port Moresby General Hospital</td>
<td>Dr Janet Serkit (DCH-PMGH)</td>
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<tr>
<td>10:40</td>
<td>What happens to children at PMGH Accident &amp; Emergency department after 4 pm?</td>
<td>Dr John Tsiparau (DCH: A&amp;E, PMGH)</td>
</tr>
<tr>
<td>11:00</td>
<td>Use of an Interferon gamma release assay (IGRA) in detection of TB in children.</td>
<td>Dr Tarsicius Uluk (MMed II, PMGH)</td>
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<tr>
<td>11:20</td>
<td>The Aetiology of meningoencephalitis in children admitted to PMGH</td>
<td>Dr Gwenda Anga (MMed II)</td>
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<tr>
<td>11:40</td>
<td>The Outcome of meningoencephalitis in children admitted to PMGH</td>
<td>Dr Roland Banabas (MMed II, PMGH)</td>
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<tr>
<td>12:00-13:00</td>
<td>Lunch</td>
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<tr>
<td>13:00</td>
<td>Pneumococcal vaccine proposal</td>
<td>Dr William Lagani/ Dr R Duncan(WHO)</td>
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<tr>
<td>13:20</td>
<td>Discussion</td>
<td>ALL</td>
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<td>13:20</td>
<td>Malaria Diagnosis with RDT in Children</td>
<td>Dr Norbert Rhelis (WHO)</td>
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<tr>
<td>13:40</td>
<td>Multidrug resistant klebsiella pneumonia in the SCN, PMGH</td>
<td>Dr Koni Sobi</td>
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<tr>
<td>14:00</td>
<td>Up-date on Bachelor of Clinical Nursing Curriculum</td>
<td>Prof John Vince</td>
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<tr>
<td>14:20</td>
<td>Up-date Paediatric AFP, Measles surveillance</td>
<td>Mr Barry Ropa</td>
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<tr>
<td>14:40</td>
<td>Acute Abdomen: A Re-emerging disease in the Highlands</td>
<td>Dr Gabriel Kune</td>
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<td>15:00</td>
<td>Afternoon Tea Break</td>
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<tr>
<td>15:20</td>
<td>Paediatric Society Meeting</td>
<td>Dr Mokela/ Dr Amini</td>
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<tr>
<td>08:00</td>
<td>Up- date on the Standard treatment manual</td>
<td>Prof NakapiTefuarani/ Dr Stella Jimmy</td>
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<tr>
<td>08:20</td>
<td>Pneumonia/ Meningitis treatment</td>
<td>Dr David Mokela/ Prof Trevor Duke</td>
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<tr>
<td>08:40</td>
<td>Malaria treatment</td>
<td>Dr Ilimo Hwawhanje/ Dr David Mokela</td>
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<tr>
<td>09:00</td>
<td>Paediatric TB FDC</td>
<td>Dr Harry Poku/ Prof John Vince</td>
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<td>09:20</td>
<td>IMCI Up-date</td>
<td>Dr Gilchrist Oswyn/ Dr David Mokela</td>
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<td>09:40</td>
<td>Paed HIV &amp; STI</td>
<td>Dr Mobumo Kiromat</td>
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<td>10:00</td>
<td>Morning Tea Break</td>
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<td>10:20</td>
<td>Neonates</td>
<td>Dr. Theresa Rongap/ Dr Koni Sobi</td>
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<td>10:40</td>
<td>Adolescent health</td>
<td>Dr Wendy Pameh</td>
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<td>11:00</td>
<td>Asthma</td>
<td>Dr Paulus Ripa</td>
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<td>11:20</td>
<td>Nutrition -WHO – WFA, Breastfeeding recommendations, vitamin A etc</td>
<td>Drs James Amini/ Patrick Kiromat/ David Mokela</td>
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<td>11:40</td>
<td>Ear Problems in Children</td>
<td>Dr Paki Molumi</td>
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<td>Lunch</td>
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<td>13:00</td>
<td>WHO-WFA z-score</td>
<td>Mrs Wila Saweri/ Prof John Vince</td>
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<td>13:20</td>
<td>Discussion</td>
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<td>13:40</td>
<td>Multidrug resistant klebsiella pneumonia in the SCN, PMGH</td>
<td>Dr Koni Sobi</td>
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<td>14:00</td>
<td>G-6-PD variants in East Sepik Province of Papua New Guinea</td>
<td>Dr Ilimo Hwawhanje</td>
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<td>14:20</td>
<td>Clinical Updates</td>
<td>TBA</td>
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<td>14:40</td>
<td>TEA BREAK</td>
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<tr>
<td>15:00</td>
<td>Recommendation</td>
<td>Dr David Mokela</td>
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<td>16:00</td>
<td>Closing</td>
<td>Dr David Mokela</td>
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### Public Private Partnership in Health Care

#### OBSTETRICS AND GYNAECOLOGY SOCIETY

**03rd AND 04th SEPTEMBER 2009**

**VENUE: SMHS, NLT 1 (EU Building)**

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<td><strong>FRIDAY 3RD SEPTEMBER 2009</strong></td>
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<tr>
<td>08:30 – 08:45</td>
<td>President’s Address</td>
<td>Dr Ligo Augerea</td>
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<td>08:45 – 09:15</td>
<td>TBA</td>
<td>TBA Hospital Representatives</td>
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<td>09:15 – 10:00</td>
<td>Annual Hospital Statistics</td>
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<td>Morning Tea Break</td>
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<td></td>
<td>Chairman: Prof Bediako Amoa</td>
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<td>10:30 – 12:00</td>
<td>Maternal Deaths</td>
<td>Hospital Representatives</td>
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<td>Chairman: Dr Lahui Geita</td>
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<td>13:00 – 13:30</td>
<td>Common Indications for Obstetrics Referrals to Kimbe Hospital</td>
<td>Dr Frank Kapipi</td>
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<td>13:30 – 14:00</td>
<td>Knowledge, Attitudes &amp; Behaviour of Antenatal Mothers on HIV/AIDS in Modillion Hospital</td>
<td>Dr Joshua Kaman, DGO, Madang</td>
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<td>14:00 – 14:30</td>
<td>Management of outcomes of HIV in Pregnancy at Goroka Base Hospital</td>
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<td>15:00 – 15:30</td>
<td>TBA</td>
<td>Dr J Coates &amp; team</td>
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<td>15:30 – 17:00</td>
<td>AGM</td>
<td>Financial Members</td>
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<td>18:00</td>
<td>O &amp; G Society Dinner – Holiday Inn</td>
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<tr>
<td>08:30 – 09:00</td>
<td>Obstetric &amp; Gynaecological fistulae</td>
<td>Prof AB Amoa</td>
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<td>09:00 – 09:30</td>
<td>Analysis of Uterine rupture in Angau Hospital</td>
<td>Dr Morea Geita, DGO, Angau</td>
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<td>Morning Tea Break</td>
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<td></td>
<td>Chairman: Dr Godfrey Naboam</td>
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<tr>
<td>10:30 – 11:00</td>
<td>A brief look at possible missed opportunities during pregnancy</td>
<td>Mr G Saleu</td>
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<td>11:00 – 11:30</td>
<td>Operative Deliveries at PMGH</td>
<td>Dr Joe Kuk (at MMED 2)</td>
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<td>11:30 – 12:00</td>
<td>Vasectomies in ESP</td>
<td>Dr Godfrey Naboam</td>
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<td>12:00 – 13:00</td>
<td>Lunch Break</td>
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<td>Chairman: Dr Joel Healesville</td>
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<td>13:00 – 13:30</td>
<td>TBA</td>
<td>Dr B Kombuk (at MMED 2)</td>
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<tr>
<td>13:30 – 14:00</td>
<td>The role of Medical Practitioners in sexual offence investigations presented in partnership by the office of public prosecutor and RPNC</td>
<td>J W Tamate</td>
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<td>14:00 – 14:30</td>
<td>New opportunities for management of diabetes in pregnancy</td>
<td>Dr W M Hague</td>
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<td>14:30 – 15:00</td>
<td>Public Private Partnership in Delivering Women’s Health in PNG</td>
<td>Dr Mathias Sapuri</td>
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<td>Afternoon Tea Break</td>
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<td>15:30 – 16:00</td>
<td>CLOSING REMARKS</td>
<td>Dr Ligo Augerea</td>
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**A Proud Co-Host of the 2009 Medical Symposium**

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**2009 MEDICAL SYMPOSIUM**

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**www.mspng.org**
THURSDAY 03rd SEPTEMBER 2009
SURGICAL SOCIETY SYMPOSIUM
VENUE: GATEWAY HOTEL

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<td>Opening Prayer</td>
<td>Dr Jersey Kuzma</td>
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<td>08:05 – 08:15</td>
<td>Opening Address by President of Surgical Society</td>
<td>Dr Ikau Kevau</td>
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<tr>
<td>08:15 – 08:45</td>
<td>Keynote Address by Paediatric Surgeon, Christchurch</td>
<td>Dr Kiki Moate</td>
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<td>08:45 – 09:00</td>
<td>Cardiothoracic Surgery Experience in India</td>
<td>Dr Lister Lun</td>
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<td>09:00 – 09:15</td>
<td>Operation Open Heart, Past and the Future</td>
<td>Dr Noah Tapaua</td>
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<tr>
<td>09:15 – 09:30</td>
<td>Sign Nail, Port Moreseby Perspective</td>
<td>Drs I Kevau, P Kaminien, J Kuzma</td>
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<tr>
<td>09:30 – 09:45</td>
<td>Laparoscopic Surgery In PNG, a new challenge</td>
<td>Dr Anorld Waine</td>
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<tr>
<td>09:45 – 10:00</td>
<td>Hydrocephalus Management in PNG</td>
<td>Drs Sammy Thomas, Willie Kapligau</td>
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<tr>
<td>10:00 – 10:30</td>
<td>Morning Tea Break</td>
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<tr>
<td>10:30 – 10:45</td>
<td>Spinal Injury in Angau Hospital (MMED Thesis)</td>
<td>Dr Mun Dat</td>
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<tr>
<td>10:45 – 11:00</td>
<td>Gunshot wounds at PMGH (MMED Thesis)</td>
<td>Dr Lino Tom</td>
</tr>
<tr>
<td>11:00 – 11:15</td>
<td>Abdominal Stab wounds at PMGH (MMED Thesis)</td>
<td>Dr James Maibon</td>
</tr>
<tr>
<td>11:15 – 11:30</td>
<td>The Route to Successful Publication</td>
<td>Dr Jersey Guzma</td>
</tr>
<tr>
<td>11:30 – 11:45</td>
<td>Trauma in East Timor</td>
<td>Dr Jose Pedro Xavier</td>
</tr>
<tr>
<td>11:45 – 12:00</td>
<td>Ponselli Method of Treatment of Club Foot in PNG</td>
<td>Dr J Kuzma, Dr Peter Kaminien</td>
</tr>
<tr>
<td>12:00 – 12:15</td>
<td>Urachal anomalies in Childrens Hospital, Westmead</td>
<td>Dr Benjamin Yapo</td>
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<td>12:15 – 13:00</td>
<td>Lunch</td>
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<tr>
<th>TIME</th>
<th>PRESENTATION</th>
<th>SPEAKER</th>
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<tbody>
<tr>
<td>13:00 – 13:15</td>
<td>Surgical Audits Standardization</td>
<td>Dr George Gende</td>
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<tr>
<td>13:15 – 13:30</td>
<td>Current Urological Practice in PNG</td>
<td>Dr Osborne Liko</td>
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<tr>
<td>13:30 – 13:45</td>
<td>Surgical Audit at Lorengau Hospital</td>
<td>Dr Marat Maire</td>
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<tr>
<td>13:45 – 14:00</td>
<td>Surgical Audit at Wewak Hospital</td>
<td>Dr Lawrence Warangi</td>
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<tr>
<td>14:00 – 14:15</td>
<td>Head Injury Management in PNG</td>
<td>Dr W Kapligau, Dr S Thomas</td>
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<td>14:15 – 14:25</td>
<td>Spinal Injuries in PMGH</td>
<td>Dr P Kaminien, Dr I Kevau</td>
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<td>14:25 – 14:35</td>
<td>Update on Disaster Medicine in PNG</td>
<td>Dr Victor Golpak</td>
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<tr>
<th>TIME</th>
<th>PRESENTATION</th>
<th>SPEAKER</th>
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<tbody>
<tr>
<td>14:40 – 14:50</td>
<td>X-Rays of Sepik Iron Man</td>
<td>Dr Lawrence Warangi</td>
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<tr>
<td>14:50 – 15:00</td>
<td>Tracheoesophageal fistulae &amp; proximal atresia</td>
<td>Dr Noah Tapaua</td>
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<tr>
<td>15:00 – 15:10</td>
<td>Hepatobiliary Pancreatic Tumour</td>
<td>Dr Damien Hasola, Dr Arnold Waine</td>
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<tr>
<td>15:10 – 15:20</td>
<td>A case of large, multi-cystic lymphatic malformation</td>
<td>Dr William Mol</td>
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<tr>
<td>15:20 – 15:30</td>
<td>An. Italian Immigrant with Mirizzi Syndrome</td>
<td>Dr Arnold Waine</td>
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<td>15:30 – 16:00</td>
<td>Afternoon Tea Break</td>
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<tr>
<td>16:00 – 17:00</td>
<td>Surgical AGM</td>
<td>Dr Ikau Kevau</td>
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<tr>
<td>17:00 – 17:05</td>
<td>Closing Prayer</td>
<td>Dr Okti Poki</td>
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Ministry of Health and HIV/AIDS

Focussing on Primary Health Care Delivery
## PUBLIC HEALTH SPECIALTY MEETING

**VENUE:** SMHS NURSING BUILDING TUT RM 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>07:45 - 08:00</td>
<td>Welcome address</td>
<td>Dr. John Saireere</td>
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<tr>
<td>08:00 - 08:30</td>
<td>Prayer &amp; Devotion</td>
<td>Pr. Dian Warep</td>
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<tr>
<td>08:30 - 09:00</td>
<td>Keynote address: PNG National Health Plan: What have we achieved?</td>
<td>Dr. Jane Thomsom</td>
</tr>
<tr>
<td>09:00 - 09:15</td>
<td>Public Private Partnership Policy</td>
<td>Ms. Anna Irumai</td>
</tr>
<tr>
<td>09:15 - 09:30</td>
<td>Public Private Partnership - Churches</td>
<td>Dr. Peter Sapak</td>
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<tr>
<td>09:30 - 10:00</td>
<td>Public Private Partnership – H/M Training</td>
<td>Mr. Kitchenwan Chakurnai</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Morning Tea Break</td>
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<tr>
<td>10:30 - 10:45</td>
<td>Public Private Partnership – St. Johns</td>
<td>Dr. Isaac Ake</td>
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<td>11:45 - 12:00</td>
<td>Public Private Partnership – Malaria Program</td>
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<td>Public Private Partnership – TB Program</td>
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<td>13:00 - 14:30</td>
<td>Public Private Partnership – HIV/STI Program</td>
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<td>Public Private Partnership – Burnet Institute</td>
<td>Mr. Jim Benn</td>
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<td>Public Private Partnership – C/Transformation</td>
<td>Pr. Dian Warep</td>
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<td>12:00 - 13:00</td>
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<td>13:00 - 15:00</td>
<td>Students Presentation</td>
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<td>15:00 - 15:15</td>
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<td>15:15 - 16:05</td>
<td>Students Presentation</td>
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<td>17:00 - 18:30</td>
<td>ASSOCIATION MEETING</td>
<td>Holiday Inn</td>
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<td>19:00 - 22:00</td>
<td>ASSOCIATION DINNER</td>
<td>PNGAPH/PNGSHS</td>
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## FRIDAY 04th SEPTEMBER 2009

**ENT SOCIETY MEETING**

**VENUE:** PMGH SURGICAL TUTORIAL ROOM ONE, DATE: 03rd SEPTEMBER 2009

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>08:30 - 08:45</td>
<td>Cancer Referral Strategies for Head &amp; Neck Cancer Patients to ANGAU</td>
<td>Dr. John Nibblet</td>
</tr>
<tr>
<td>08:45 - 08:50</td>
<td>Discussion</td>
<td></td>
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<tr>
<td>08:50 - 09:05</td>
<td>Outcome of ENT patients who has undergone radiotherapy</td>
<td>Dr. Joseph Garap</td>
</tr>
<tr>
<td>09:05 - 09:10</td>
<td>Discussion</td>
<td></td>
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<tr>
<td>09:10 - 09:25</td>
<td>How to move ENT forward in the next 10 years</td>
<td>Open Forum</td>
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<td>09:25 - 09:30</td>
<td>Discussion</td>
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**Session Two**

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>09:30 - 09:45</td>
<td>Limitations of ENT Surgical Processes in PNG</td>
<td>Dr. James Naiapo</td>
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<tr>
<td>09:45 - 09:50</td>
<td>Discussion</td>
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<td>09:50 - 10:05</td>
<td>New Surgical Techniques in ENT</td>
<td>Dr. C Molumi</td>
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<td>10:05 - 10:10</td>
<td>Discussion</td>
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<tr>
<td>10:10 - 10:25</td>
<td>Impact of Rabaul Volcano Ash and Delivery of ENT Services at Nonga Base Hospital</td>
<td>Dr. Larawan Varqa</td>
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<tr>
<td>10:25 - 10:30</td>
<td>Discussion</td>
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<tr>
<td>10:30 - 10:45</td>
<td>What Can Be Learnt From Goroka Base Hospital</td>
<td>Dr. S. Endican</td>
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<tr>
<td>10:45 - 10:50</td>
<td>Discussion</td>
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<tr>
<td>10:50 - 11:05</td>
<td>How he does it as an Administrator and ENT Surgeon</td>
<td>Dr. M. Dokup</td>
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<tr>
<td>11:05 - 11:10</td>
<td>Discussion</td>
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<tr>
<td>11:10 - 11:30</td>
<td>Selection of ENT Training Registrar 2010</td>
<td>OPEN FORUM</td>
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<tr>
<td>11:30 - 11:45</td>
<td>PNG ORLHNS Society</td>
<td>OPEN FORUM</td>
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<td>11:45 - 12:00</td>
<td>BUNG WANTAIM NA HAMAMAS</td>
<td>TBA</td>
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### Thursday 4th September 2009
**Public Private Partnership in Health Care**
**Venue:** SMHS Nursing Building TUT RM 2

<table>
<thead>
<tr>
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<th>Speaker</th>
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<tbody>
<tr>
<td>08:00 - 08:20</td>
<td>Registration of Participants</td>
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<tr>
<td>8.20 - 8.25</td>
<td>CHAIRMAN: Dr. Pius Umo</td>
<td>Lucy Mule</td>
</tr>
<tr>
<td>8.05 - 8.15</td>
<td>Opening Prayer + Dedication of Society</td>
<td>Mr. George OTTO</td>
</tr>
<tr>
<td>8.15 - 8.30</td>
<td>WELCOME ADDRESS - PRESIDENT</td>
<td>Mr. Joe WAPI</td>
</tr>
<tr>
<td>8.30 - 9.00</td>
<td>TOPIC TBA</td>
<td>Dr. Dora Lenturut</td>
</tr>
<tr>
<td>9.00 - 10.00</td>
<td>TOPIC TBA</td>
<td>Mr. Alois Sinyoi</td>
</tr>
<tr>
<td>10.00 - 10.15</td>
<td>Morning Tea Break</td>
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<td>10.15 - 11.35</td>
<td>CHAIRPERSON: MS ELIZABETH</td>
<td>TBA</td>
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<tr>
<td>11.35 - 11.55</td>
<td>Radiography – A Public Private Partnership</td>
<td>Dr. Pius Umo</td>
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<td>11.55 - 12.00</td>
<td>Questions &amp; Discussions.</td>
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<tr>
<td>12.00 - 13.00</td>
<td>Lunch</td>
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<tr>
<td>13.00 - 14.20</td>
<td>CHAIRPERSON: DR. DORA LENTURUT</td>
<td>Moses Taram</td>
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<tr>
<td>14.20 - 14.40</td>
<td>CPD for Radiographers in Papua New Guinea</td>
<td>Noela Desini (PIH)</td>
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<tr>
<td>14.40 - 15.00</td>
<td>Clinical Mammography – PPP Experience</td>
<td>Martina (SMMC)</td>
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<td>15.00 - 15.15</td>
<td>Afternoon Tea Break</td>
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<tr>
<td>15.15 - 15.35</td>
<td>CHAIRPERSON: MR GEORGE OTTO</td>
<td>Scholar Pope</td>
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<td>15.35 - 15.55</td>
<td>Radiation Dose for Radiographers in Papua New Guinea</td>
<td>Beverly Daniel</td>
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<tr>
<td>16.00 - 16.15</td>
<td>Reject Analysis of Chest X-rays at PMGH</td>
<td>Jimmy Kinok</td>
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<tr>
<td>15.00 - 10.00</td>
<td>SPECIALTY DINNER – HIDEAWAY</td>
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### Friday 5th September 2009
**Medical Imaging Society**
**Venue:** SMHS Nursing Building TUT RM 2

<table>
<thead>
<tr>
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<tr>
<td>08:00 - 08:05</td>
<td>CHAIRPERSON: TBA</td>
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<tr>
<td>08:05 - 08:35</td>
<td>Presentation of M.Med 2 Research Project</td>
<td>Dr. M. Kuta</td>
</tr>
<tr>
<td>08:35 - 09:05</td>
<td>Presentation of M.Med 2 Research Project/proposal</td>
<td>Dr. B. Fingkeo</td>
</tr>
<tr>
<td>09:05 - 09:35</td>
<td>Presentation of M.Med 2 Research Project/proposal</td>
<td>Dr. M. Clement</td>
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<td>09:35 - 10:00</td>
<td>Discussion + Questions</td>
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<td>10.10 - 10.20</td>
<td>Morning Tea Break</td>
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<td>10.20 - 10.45</td>
<td>TOPIC TBA</td>
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<td>10.45 - 11.10</td>
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<tr>
<td>11.30 - 11.50</td>
<td>TOPIC TBA</td>
<td>TBA</td>
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<tr>
<td>11.50 - 12.00</td>
<td>Question Time</td>
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<tr>
<td>12.00 - 13.00</td>
<td>Lunch</td>
<td>TBA</td>
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<tr>
<td>13.00 - 15.00</td>
<td>CHAIRMAN – ALOIS SINYOI</td>
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<td>15.00 - 15.15</td>
<td>Afternoon Tea Break</td>
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<tr>
<td>15.15 - 5.15</td>
<td>First Annual General Meeting of the Medical Imaging Society of PNG</td>
<td>All Members</td>
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</table>

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*NDA is proud to be associated with the 45th Annual Medical Symposium*

**Care for NDA to Care for You**
## PUBLIC PRIVATE PARTNERSHIP IN HEALTH CARE

**SOCIETY OF ANAESTHETISTS OF PAPUA NEW GUINEA**  
**VENUE:** SCHOOL OF MEDICINE & HEALTH SCIENCES  
**THEME:** PROVIDING SAFE ANAESTHESIA  
**THURSDAY 03rd AUGUST 2009**

### DIFFICULT AIRWAY MANAGEMENT

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<tr>
<td>08:00 – 08:20</td>
<td>Registration</td>
<td>Akelisa</td>
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<td>08:20 – 08:40</td>
<td>Registration</td>
<td>Akelisa</td>
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<tr>
<td>08:40 – 09:00</td>
<td>Registration</td>
<td>MC</td>
</tr>
<tr>
<td>09:00 – 09:20</td>
<td>Opening</td>
<td>MC</td>
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<tr>
<td>09:20 – 09:40</td>
<td>Update on Resuscitation</td>
<td>Dr C Acott</td>
</tr>
<tr>
<td>10:00 – 10:20</td>
<td>Update on Resuscitation</td>
<td>Dr C Acott</td>
</tr>
<tr>
<td>10:20 – 10:40</td>
<td>Morning Tea</td>
<td></td>
</tr>
<tr>
<td>10:40 – 11:00</td>
<td>Ideal positioning for successful ET intubation</td>
<td>Dr L Nasedra</td>
</tr>
<tr>
<td>11:00 – 11:20</td>
<td>A case of difficult airway management in Eye Surgery</td>
<td>Dr M Moguna</td>
</tr>
<tr>
<td>11:20 – 11:40</td>
<td>Question Time</td>
<td></td>
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<tr>
<td>12:00 – 13:00</td>
<td>Lunch</td>
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<tr>
<td>13:00 – 13:20</td>
<td>Difficult Airway presentation</td>
<td>Dr C Acott</td>
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<td>13:20 – 13:40</td>
<td>Difficult Airway presentation</td>
<td>Dr C Acott</td>
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<td>13:40 – 14:00</td>
<td>Difficult Airway presentation</td>
<td>Dr C Acott</td>
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<tr>
<td>14:00 – 14:20</td>
<td>Difficult Airway Workshop</td>
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<td>15:00 – 15:20</td>
<td>Afternoon Tea</td>
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<td>15:40 – 16:00</td>
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<td>Difficult Airway Workshop</td>
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<td>16:20 – 16:40</td>
<td>Plenary Session</td>
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<td>16:40 – 17:00</td>
<td>Plenary Session</td>
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<td>19:00 – 22:00</td>
<td>Dinner</td>
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**FRIDAY 4TH AUGUST 2009**

### Session One : Paediatric Anaesthesia

<table>
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<tr>
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<th>TOPIC</th>
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<tbody>
<tr>
<td>08:00 – 08:20</td>
<td>CPR in children</td>
<td>Dr R Krieser</td>
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<tr>
<td>08:20 – 08:40</td>
<td>Pre-operative assessment in children</td>
<td>Dr J Birisi</td>
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<tr>
<td>08:40 – 09:00</td>
<td>Analgesia in Paediatric Anaesthesia</td>
<td>Dr R Krieser</td>
</tr>
<tr>
<td>09:00 – 09:20</td>
<td>Regional Blocks in children</td>
<td>Dr L Sogoromon</td>
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<tr>
<td>09:20 – 09:40</td>
<td>Fluid therapy and blood transfusion in children</td>
<td>Dr R Krieser</td>
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<td>09:40 – 10:00</td>
<td>Question Time</td>
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<tr>
<td>10:00 – 10:20</td>
<td>Morning Tea</td>
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### Session Two : Obstetric Anaesthesia

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<tbody>
<tr>
<td>10:20 – 10:40</td>
<td>Changes in fetal circulation at birth &amp; anaesthetic implications</td>
<td>Dr R Korimbo</td>
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<tr>
<td>10:40 – 11:00</td>
<td>Physiological changes in pregnancy &amp; anaesthetic implications</td>
<td>Dr H Paiva</td>
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<tr>
<td>11:00 – 11:20</td>
<td>Pre-eclamptic Toxaemia with complication</td>
<td>Dr K Temo</td>
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<tr>
<td>11:20 – 11:40</td>
<td>Regional anaesthesia for Obstetric &amp; Gynaec surgery</td>
<td>Dr L Nasedra</td>
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<td>11:40 – 12:00</td>
<td>Lunch</td>
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### Session Three : Co-Existing Medical Conditions & Anaesthesia

<table>
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<tbody>
<tr>
<td>13:00 – 13:20</td>
<td>Effectiveness of care in ICU – MMED study</td>
<td>Dr G Tokwabilula</td>
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<tr>
<td>13:20 – 13:40</td>
<td>Oral Ketamine Premedication – MMED study</td>
<td>Dr L Akelisa</td>
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<tr>
<td>13:40 – 14:00</td>
<td>Diabetes Management in Anaesthesia</td>
<td>Dr L Nasedra</td>
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<tr>
<td>14:00 – 14:20</td>
<td>Anaesthetic consideration in CHD patients for non-cardiac surgery</td>
<td>Dr Arvin Karu</td>
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<tr>
<td>14:20 – 14:40</td>
<td>Myasthenia Gravis – Case Presentation</td>
<td>Dr K Temo</td>
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<td>14:40 – 15:00</td>
<td>Question Time</td>
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<tr>
<td>15:00 – 15:20</td>
<td>Afternoon Tea</td>
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<tr>
<td>15:20 – 15:40</td>
<td>Asthma in Anaesthesia</td>
<td>Dr R Paiva</td>
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<tr>
<td>15:40 – 16:00</td>
<td>Pre-operative management of a septic patient</td>
<td>Dr Kepas Kapeo</td>
</tr>
<tr>
<td>16:00 – 16:20</td>
<td>Management of Head Injury</td>
<td>Dr L Samof</td>
</tr>
<tr>
<td>16:20 – 16:40</td>
<td>Complications associated with prolonged general anaesthesia</td>
<td>Dr J Goswami</td>
</tr>
<tr>
<td>16:40 – 17:00</td>
<td>Question Time</td>
<td></td>
</tr>
<tr>
<td>19:00 – 22:00</td>
<td>NDA Function</td>
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</tbody>
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*Provided by the Society of Anaesthetists of Papua New Guinea*
### SATURDAY 05TH AUGUST 2009

#### Session One: Hazards and Equipment Failure

<table>
<thead>
<tr>
<th>TIME</th>
<th>TOPIC</th>
<th>SPEAKER</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 – 08:20</td>
<td>Intra-operative accidental extubation</td>
<td>Dr G Tokwabiula</td>
</tr>
<tr>
<td>08:20 – 08:40</td>
<td>Dilemma in the absence of artificial ventilation</td>
<td>Dr J Birisi</td>
</tr>
<tr>
<td>08:40 – 09:00</td>
<td>Accidental surgical fires – An anaesthetic Disaster</td>
<td>Mr Wesley</td>
</tr>
<tr>
<td>09:00 – 09:20</td>
<td>Potentials for explosion and burns in the OR</td>
<td>Dr H Aigeeleng</td>
</tr>
<tr>
<td>09:20 – 09:40</td>
<td>Electrical Safety</td>
<td>Mr M Yabri</td>
</tr>
<tr>
<td>09:40 – 10:00</td>
<td>Question Time</td>
<td></td>
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<tr>
<td>10:00 – 10:20</td>
<td>Morning Tea</td>
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#### Session Two: Work Ethics

<table>
<thead>
<tr>
<th>TIME</th>
<th>TOPIC</th>
<th>SPEAKER</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:20 – 10:40</td>
<td>Occupational risks in Anaesthesia</td>
<td>Dr R Frieser</td>
</tr>
<tr>
<td>10:40 – 11:00</td>
<td>Work experience in India</td>
<td>Dr Arvin Karu</td>
</tr>
<tr>
<td>11:00 – 11:20</td>
<td>Approach to Critical Care, a team effort</td>
<td>Dr L Samof</td>
</tr>
<tr>
<td>11:20 – 11:40</td>
<td>Question Time</td>
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<tr>
<td>11:40 – 12:00</td>
<td>Closing Remarks</td>
<td></td>
</tr>
<tr>
<td>12:00 – 13:00</td>
<td>Lunch</td>
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#### Session Three: Meetings

- AGM
- SEPARATE MEETINGS (SMO & ASO)

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**PNG SEXUAL HEALTH SOCIETY ANNUAL MEDICAL SYMPOSIUM PROGRAM**

**DATE:** 24TH TO 28TH AUGUST 2009  
**VENUE:** HOLIDAY INN

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday 24th August</th>
<th>Tuesday 25th August</th>
<th>Wednesday 26th August</th>
<th>Thursday 27th August</th>
<th>Friday 28th August</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Registration</td>
<td>Clinical case presentations and Discussions</td>
<td>Clinical case presentations and Discussions</td>
<td>Clinical case presentations and Discussions</td>
<td>Clinical case presentations and Discussions</td>
</tr>
<tr>
<td>09:00</td>
<td>Official opening</td>
<td>PPTCT</td>
<td>Paediatric HIV</td>
<td>ART Database</td>
<td>HAMP Act</td>
</tr>
<tr>
<td>10:00</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
</tr>
<tr>
<td>10:30</td>
<td>Introduction</td>
<td></td>
<td></td>
<td>ART Reporting</td>
<td></td>
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<tr>
<td></td>
<td>Objectives and Overview of workshop</td>
<td></td>
<td></td>
<td>ARV Supplies</td>
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<tr>
<td>11:00</td>
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<td>LUNCH</td>
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<td>LUNCH</td>
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<tr>
<td>12:00</td>
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<td>LUNCH</td>
<td>LUNCH</td>
<td>LUNCH</td>
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<tr>
<td>1300</td>
<td>ART in PNG HIV Epidemic</td>
<td>Clinical presentation</td>
<td>Clinical presentation</td>
<td>Clinical presentation</td>
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<td>VCT and PICT Laboratory testing</td>
<td>Clinical presentation</td>
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<tr>
<td>1530</td>
<td>ART Reporting</td>
<td>STI – Syphilis</td>
<td>HIV PCR</td>
<td>TB and HIV</td>
<td>Closing of Workshop</td>
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<tr>
<td></td>
<td>ARV Supplies</td>
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<td>1630</td>
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<tr>
<td>1830</td>
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THE PNG SEXUAL HEALTH SOCIETY AND PNG PUBLIC HEALTH ASSOCIATION SYMPOSIUM 2009

VENUE: SCHOOL OF MEDICINE AND HEALTH SCIENCES OLT AND HOLIDAY INN

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday 31st August</th>
<th>Tuesday 1st September</th>
<th>Wednesday 2nd September</th>
<th>Thursday 3rd September</th>
<th>Friday 4th September</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Annual Medical Symposium Plenary Sessions</td>
<td>Annual Medical Symposium Session</td>
<td>Regionalising STI and HIV Response plus Linking Research to Policy and Practice</td>
<td>Registration</td>
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</tr>
<tr>
<td>08.30</td>
<td>Annual Medical Symposium Session</td>
<td>Guest Speaker: Prof. John McBride STI and HIV Session</td>
<td></td>
<td>Keynote Speaker: Levinia Crooks</td>
<td>Research papers</td>
</tr>
<tr>
<td>10:00</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
<td>Morning Tea</td>
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<tr>
<td>10.30</td>
<td>Annual Medical Symposium Session</td>
<td>Annual Medical Symposium Session</td>
<td>Annual Medical Symposium Session</td>
<td>Regionalising STI/HIV Response</td>
<td>Research papers</td>
</tr>
<tr>
<td>12.00</td>
<td>LUNCH</td>
<td>LUNCH</td>
<td>LUNCH</td>
<td>LUNCH</td>
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<tr>
<td>1300</td>
<td>Annual Medical Symposium Session</td>
<td>Annual Medical Symposium Session</td>
<td>Annual Medical Symposium Session</td>
<td>Research papers</td>
<td>Research papers</td>
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<td>1500</td>
<td>Afternoon Tea</td>
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<td>Afternoon Tea</td>
<td>Afternoon Tea</td>
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<tr>
<td>1530</td>
<td>Annual Medical Symposium Session</td>
<td>Annual Medical Symposium Session</td>
<td>Annual Medical Symposium Session</td>
<td>PNG SHS AGM</td>
<td>PHA AGM</td>
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<tr>
<td>1830</td>
<td>Governors Dinner</td>
<td>Medical Society Dinner</td>
<td>Cultural Night</td>
<td>Dinner</td>
<td>NDA Dinner</td>
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Driving Rural Development through Public Private Partnership

Ministry of National Planning & Rural Development
# EMERGENCY MEDICINE

**03rd and 4th September 2009**  
**Venue:** Nursing Lecture Theater, SMHS, UPNG

## Day One Thursday 4th September 2008

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 – 08:15</td>
<td>Welcome/Introduction</td>
<td>Dr Sonny Kibob</td>
</tr>
<tr>
<td></td>
<td><strong>First Session</strong></td>
<td></td>
</tr>
<tr>
<td>08:15 – 08:45</td>
<td>Open Paper</td>
<td>Prof Chris Curry</td>
</tr>
<tr>
<td>09:45 – 10:00</td>
<td>Open Paper</td>
<td>Anaesthesia</td>
</tr>
<tr>
<td>10:00 – 10:15</td>
<td>Morning Tea</td>
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<tr>
<td></td>
<td><strong>Second Session</strong></td>
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</tr>
<tr>
<td>10:15 – 10:30</td>
<td>Crisis Management</td>
<td>Dr Sam Yockopua</td>
</tr>
<tr>
<td>10:30 – 10:45</td>
<td>Open Paper</td>
<td>Anaesthesia</td>
</tr>
<tr>
<td>10:45 – 11:00</td>
<td>Open Paper</td>
<td>Dr John Kennedy</td>
</tr>
<tr>
<td>11:00 – 11:15</td>
<td>Open Paper</td>
<td>Anaesthesia</td>
</tr>
<tr>
<td>11:15 – 11:30</td>
<td>Open Paper</td>
<td>EM</td>
</tr>
<tr>
<td>11:30 – 12:30</td>
<td>Business Meeting</td>
<td>Combined</td>
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<tr>
<td>12:30 – 13:00</td>
<td>LUNCH</td>
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<tr>
<td></td>
<td><strong>Third Session</strong></td>
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<tr>
<td>13:00 – 13:30</td>
<td>Open Paper</td>
<td>Prof Chris Curry</td>
</tr>
<tr>
<td>13:30 – 14:00</td>
<td>Road Traffic Accident at PMGH</td>
<td>Dr Gary Nou</td>
</tr>
<tr>
<td>14:00 – 14:30</td>
<td>Analysis of Domestic Violence</td>
<td>Dr S Ugava</td>
</tr>
<tr>
<td>14:30 – 14:45</td>
<td>Afternoon Tea</td>
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<td></td>
<td><strong>Fourth Session</strong></td>
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<tr>
<td>14:45 – 15:15</td>
<td>Open Paper</td>
<td>Dr John Kennedy</td>
</tr>
<tr>
<td>15:15 – 15:45</td>
<td>Adequacy in Management of Paediatric patients in ED</td>
<td>Dr John Tsiperau</td>
</tr>
<tr>
<td>15:45 – 16:15</td>
<td>Open Paper</td>
<td>EM Trainee</td>
</tr>
<tr>
<td>16:15 – 16:30</td>
<td>Summary and Closing Remarks</td>
<td>Dr Sonny Kibob</td>
</tr>
<tr>
<td>16:30 – 17:30</td>
<td>AGM : SPSEM</td>
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<tr>
<td>19:00 – 22:00</td>
<td>Combined Specialty Dinner</td>
<td>Maggie Seafood Restaurant</td>
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</table>

**04th - 05th September 2009, Venue:** Main Lecture Theater, SMHS, UPNG - *Emergency Life Support (ELS)* Course

## Pathology Society Meeting

**03rd and 4th September 2009**  
**Venue:** Shady Rest Hotel

## Day One Thursday 4th September 2008

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>07:30 – 08:15</td>
<td>Registration</td>
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<tr>
<td></td>
<td><strong>Session One</strong></td>
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</tr>
<tr>
<td>08:15 – 10:00</td>
<td>Laboratory Diagnosis and Haematology Disorders</td>
<td>Dr M Mathias and Team</td>
</tr>
<tr>
<td>10:00 – 10:15</td>
<td>Morning Tea Break</td>
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<tr>
<td></td>
<td><strong>Session Two</strong></td>
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</tr>
<tr>
<td>10:15 – 12:00</td>
<td>Practical</td>
<td>Dr M Mathias and Team</td>
</tr>
<tr>
<td>12:00 – 13:00</td>
<td>Lunch</td>
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<tr>
<td></td>
<td><strong>Session Three</strong></td>
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<tr>
<td>13:00 – 14:30</td>
<td>Paper Presentation</td>
<td>Speakers</td>
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<tr>
<td>14:30 – 14:45</td>
<td>Afternoon Tea</td>
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<td><strong>Session Four</strong></td>
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<tr>
<td>14:45 – 15:45</td>
<td>Paper Presentation</td>
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<td>15:45 – 16:00</td>
<td>Tea Break</td>
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<tr>
<td>16:00 – 17:00</td>
<td>Annual General Meeting</td>
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## Friday 4th September 2008

<table>
<thead>
<tr>
<th>Time</th>
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<th>Speaker</th>
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<tbody>
<tr>
<td>08:00 – 09:00</td>
<td>Registration</td>
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<tr>
<td></td>
<td><strong>Session One</strong></td>
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<tr>
<td>09:00 – 09:15</td>
<td>President Remarks</td>
<td>Dr Jacob Morewaya</td>
</tr>
<tr>
<td>09:15 – 09:45</td>
<td>Paper Presentation</td>
<td>TBA</td>
</tr>
<tr>
<td>09:45 – 10:15</td>
<td>Paper Presentation</td>
<td>TBA</td>
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<td>10:15 – 10:30</td>
<td>Morning Tea Break</td>
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<tr>
<td></td>
<td><strong>Session Two</strong></td>
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<tr>
<td>10:30 – 12:45</td>
<td>Paper Presentation</td>
<td>TBA</td>
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<td>12:15 – 14:00</td>
<td>Lunch</td>
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<td><strong>Closing Ceremony</strong></td>
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<tr>
<td>TIME</td>
<td>PRESENTATION</td>
<td>SPEAKER</td>
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<tr>
<td>7.30 - 8.00</td>
<td>REGISTRATION AND COFFEE</td>
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<tr>
<td>SESSION 1</td>
<td>Chair: Jacinta Francis</td>
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<tr>
<td>8.00 - 8.30</td>
<td>Keynote: Prof John Reeder</td>
<td>Can we eliminate malaria?</td>
</tr>
<tr>
<td>8.30 - 8.45</td>
<td>The American and Australian Societies of Microbiology: what roles can</td>
<td>Andrew Greenhill</td>
</tr>
<tr>
<td></td>
<td>they play in PNG?</td>
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<tr>
<td>9.00 - 9.45</td>
<td>The impact of ART on the health and well-being of people living with HIV</td>
<td>Angela Kelly</td>
</tr>
<tr>
<td>9.45 - 10.00</td>
<td>Training and educational opportunities</td>
<td>Pete Zimmerman</td>
</tr>
<tr>
<td>10.00 - 10.30</td>
<td>Morning Tea</td>
<td></td>
</tr>
<tr>
<td>SESSION 2</td>
<td>Chair: Pete Zimmerman</td>
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<tr>
<td>10.30 - 12.15</td>
<td>Fogarty GIDRTP Student Presentations</td>
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<tr>
<td>10.30 - 10.45</td>
<td>Coverage and Usage of Insecticide-Treated Mosquito Nets – Results</td>
<td>Gibson Gideon</td>
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<td>from a Country-wide Survey in Papua New Guinea</td>
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<tr>
<td>10.45 - 11.00</td>
<td>Impact of 7-valent Pneumococcal Conjugate Vaccine on Nasopharyngeal Carriage</td>
<td>Celestine Aho</td>
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<td>in Papua New Guinean children</td>
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<tr>
<td>11.00 - 11.15</td>
<td>The Status of Insecticide Resistance to Pyrethroids and Kdr Gene</td>
<td>John Keven Bosco</td>
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<tr>
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<td>Frequency in Natural Populations of Anopheles punctulatus group in</td>
<td></td>
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<td></td>
<td>Papua New Guinea</td>
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<tr>
<td>11.15 - 11.30</td>
<td>Using a novel high throughput molecular diagnostic technique to monitor</td>
<td>Lincoln Timinaco</td>
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<tr>
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<td>Plasmodium vivax resistance to antimalarial drugs in PNG</td>
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<tr>
<td>11.30 - 11.45</td>
<td>Optimization of Multiplex Polymerase Chain Reaction for the</td>
<td>Tawarot Kurumop</td>
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<td>Simultaneous Detection of Various Genital Ulcerative Agents in Papua New</td>
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<tr>
<td></td>
<td>Guinea</td>
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</tr>
<tr>
<td>11.45 - 12.00</td>
<td>Summer internship experience</td>
<td>Merlisa Kuama</td>
</tr>
<tr>
<td>12.00 - 12.15</td>
<td>Summer internship experience</td>
<td>Stan Yaigi</td>
</tr>
<tr>
<td>12.15 - 13.00</td>
<td>Lunch</td>
<td>Poster presentation</td>
</tr>
<tr>
<td>Session #3</td>
<td>Chair: William Pomat</td>
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<tr>
<td>13.00 - 14.00</td>
<td>Research papers</td>
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<tr>
<td>13.00 - 13.15</td>
<td>Ol tok olsom, ‘Yu ino ken slip long haus bilong mipela’; patim mi</td>
<td>Angela Kelly</td>
</tr>
<tr>
<td>13.15 - 13.30</td>
<td>Intestinal parasites in pregnant women in Goroka, EHP - Results from the</td>
<td>Audrey Michael</td>
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<tr>
<td></td>
<td>Neonatal Immunity Development Study</td>
<td></td>
</tr>
<tr>
<td>13.30 - 13.45</td>
<td>Anopheline ecology and new directions for medical entomology in PNG</td>
<td>Lisa Reimer</td>
</tr>
<tr>
<td>13.45 - 14.00</td>
<td>Diagnosing filariasis infections in humans and mosquitoes in PNG</td>
<td>Ed Thomasen</td>
</tr>
<tr>
<td>14.00 - 14.15</td>
<td>The spatial population genetics of Plasmodium falciparum on the north</td>
<td>Alyssa Barry</td>
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<tr>
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<td>coast of PNG</td>
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<tr>
<td>14.15 - 15.15</td>
<td>P.vivax Session</td>
<td>Pete Zimmerman</td>
</tr>
<tr>
<td>14.15-14.30</td>
<td>Reduced susceptibility to Plasmodium vivax malaria in association with</td>
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<td>red blood cell polymorphisms in PNG</td>
<td>Celine Barnadas</td>
</tr>
<tr>
<td>14.45-15.00</td>
<td>Differential acquisition of immunity to Plasmodium falciparum and P.vivax</td>
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<td></td>
<td>in PNG children</td>
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<tr>
<td>15.00 - 15.15</td>
<td>Discussions</td>
<td></td>
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<tr>
<td>15.15 - 15.45</td>
<td>AFTERNOON TEA</td>
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<tr>
<td>15.45 - 16.30</td>
<td>AGM</td>
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</tr>
<tr>
<td>18.00 - 22.00</td>
<td>Dinner</td>
<td>Presentation of prizes for best student presentation and poster</td>
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</tbody>
</table>
The Medical Board of PNG is a direct function under my Ministry and as the Minister responsible I have taken necessary steps over the past 2 years to improve the functions and activities of the Board. The prime reason for the regulation of health professionals is to increase safety in public health and to assist in the development of improved standards of care.

The main policies and statements are primarily based on the principles of the draft PNG Medical Practice and Registration Bill 2007, which is yet to be passed into law. I have approved the new manual to guide the PNG Medical Board and the Registrar on implementing the statutory regulations. Most of the policies and comments can also be applied to the current Medical Registration Act 1980.

The new Policy and Practice Manual is set out in the same order of the draft Bill which has six parts:

Part 1  Preliminary and Key provision including the purpose of the Bill
Part 2  Establishment and functions of the Board
Part 3  Registration and assessment
Part 4  Complaint and discipline
Part 5  Registration of Health facilities
Part 6  Miscellaneous and transitional provisions

The purpose of health professional regulation is protection of the public by ensuring that the health professionals are competent and fit to practice. This effective regulatory system promotes the health and safety of the public, promotes clinical and ethical standards within the health professions regulated, monitor health professional against these standards, provide the regulator with power to intervene when these standards are not maintained, has accountability to the public, profession and the government, promotes respect for patients’ rights and a requirement to operate within the framework of informed consent, and promotes continuing professional development and maintenance of good practice.

Current best practice for Board is to clearly separate the governance and the management role, where governance is the system and the process by which an organization is directed, controlled and is accountable to stakeholders. The Governing Board sets the strategic direction, approved high level policy, manage risks, monitor organizational performance, ensure compliance with statutory requirements and relate to stakeholders.

The Board sets standards for clinical practice and ethical conduct to be observed by health professional covered by the statute in PNG, training programmes conducted in PNG that lead to registration, and assessment of international health professionals graduates prior to their being able to practice in PNG.
The Board may make recommendation to the Minister on any matter relating to the provision of health services including
recommendation on any health care practice that the Board considers in the public interest. Prior to this step the Board must
consult with any person who may be affected by the recommendation.

The under my direction the Board has set up the following Committees: **Registration Committee**: to advise the registrar on the
registration of individuals who do not fit the policy of registration; **Disciplinary Committee**: to work with the staff to ensure
complaints are screened and minor breaches are investigated, and to deal cases of poor performance or if a health professional
cannot work due to ill health; **Standards Committee**: to be responsible for setting clinical and ethical standards for individual
professionals and for approving and monitoring training programmes and licensing and re-licensing facilities and clinics.

The register is the official list containing details of the health professionals who hold a recognised qualification in medicine,
dentistry or allied health and who in accordance with the regulations of the PNG are able to practice in PNG. One of the main
function of the Board si to control who goes on the register and who stays on the register and who is taken off the register – that
is who has the right to practice in PNG.

The groups of health professional on the register: Anaesthetic technical officers, Clinical psychologists, Community health
workers, Dentists, Dental Hygienists, Dental technicians, Dental therapists, Dispensers, Health extension officers, Health
inspectors, Malaria laboratory assistants, Medical aides, Medical laboratory assistants, Medical laboratory technicians, Medical
practitioners, Medical technologists, Occupational therapists, Optometrists, Physiotherapists, Radiotherapy technologists,
Radiographers, Specialist health extension officers (Administration) and Specialist health inspectors (Administration).

The Governor General may on advise of the Board and the Minister, designate additional categories of professional and
establish authorities approved for professionals covered by the Act.

The Board is able to grant registration in the following categories: **Temporary** – for a health professional entering PNG to
practice for up to 90 days; **Provisional** – for a health professional completing an internship or other period of probation and is for
more than three years; **Full** – a person who meets all Board requirements; and **Specialist** – a health professional who has a
post graduate qualification in medicine or dentistry which recognised by the Board.

**Registration of professional from overseas**

The Registrar will be thorough when checking for the credentials of professional entering PNG from overseas to ensure the
applicants are suitably qualified and fit to be registered. This would help ensure PNG does not inadvertently register a
professional who is known by overseas jurisdiction to be incompetent or unethical. The health professional needs to complete
the required form – Health Care Practitioners Licensure and registration - 10Q and pay the required fee. Applicant need to supply
completed form, a full curriculum vitae, proof of Identity, verified copies of their qualifications from an approved school or training
institution, letter of Good Standing sent directly from all the jurisdictions the applicant previously practice in, verified copies of
their qualifications from an approved school – (for doctors this is the medical school on the WHO or FAIMER list), self declaration
that the professional is “fit to practice”, a letter from the employer that the professional has been offered a position in the
jurisdiction, references from senior colleagues who have worked with the applicant for at least two years which gives information
on the professional ability to practice in the position sent directly from the referees, and proof of ability to communicate effectively
in the language used in the jurisdiction.

Requirement to participate in continuing professional development

The Board will introduce requirements to ensure health professionals maintain their competence through registration is a
proactive means by which the public can be assured, as far as is practicable, that those individuals that continue to be registered
are competent to do so via recertification and revalidation.

The new policy on continuing professional development (CPD) is aimed at ensuring health professionals have the knowledge
and the skills attitude and judgement to be competent and put this to practice. An effective CPD progress to be effective CPD
programme will have collaborative, continuing, multifaceted, problem based, and include adequate self assessment

All health professionals should aim at continually improving their clinical expertise, diagnostic and management skill,
communication, working in team, personal management, use of resources and time, and maintaining professional standards.
ORBITUARIES

LATE DR MORRIS WAINETTI, OL

The untimely death of Dr Morris Wanetti, OL, one of the pioneer doctors in Papua New Guinea left a vacuum in the health services especially to Western Province where he has dedicated most of his time to establish and refurbish basic government and church health services.

Born on the 30th September, 1945 Dr Morris Wainetti completed his Primary education in 1956 at the LMS Primary School, Daru, WP and his NSW Certificate at Sogeri National High School in 1964. Graduating from the then Papuan Medical School in 1969, he achieved top honors since first year and characterized as a founding member of the National Medical Officers Union which after 30 years exists today as the National Doctors Association.

He was one of the pioneering students in 1969 who fought for the transformation of the Papuan Medical College to the University of Papua New Guinea as the Faculty of Medicine which was formally recognized in 1971.

His medical career began as an RMO at POMGH, Kainantu and Nonga Base Hospital. His first posting was to Daru General Hospital in 1972 as the Medical Superintendent and became the first national tutor at the Medical Faculty, UPNG in 1973.

From 1976 to 1979 he was the Dean of Allied Health Sciences for Port Moresby and Madang, Assistant Secretary of Medical training in PNG and Acted as Secretary for Health.

At the request of the Western Province Government and the Health Minister, he was posted to Daru General Hospital as it was one of the provinces being unpopular with both expatriates and local doctors. His involvement with the Western Province Health Division saw the commissioning of Mabudawan, Emeti, Teapopo, Kiunga, Nomad, Wipim, Suki, Upiara, Morehead, Ningerum and Kibuli Health Centres in Western Province.

He obtained his Diploma in Obstetrics and Gynaecology in 1991 and resumed duties at Daru General Hospital. In 1995, established the Hospital Board and became the first Chief Executive Officer for Daru General Hospital.

He was recognized by the Medical fraternity in 2000 with a certificate of Appreciation for being one of the pioneering National Medical doctor in PNG and in 2004 was awarded life membership of the Medical Society of PNG.

He was an advocate for rural health and United Church Health Services.

LATE DR SIR JAMES EDWARD JACOBI, KBE, OBE

The death has occurred in Brisbane of Sir James Jacobi, 83, a key figure in the development of rugby league in PNG. He was President of the PNG rugby league for more than 25 years and a member of the international rugby league board.

He was born in Maryborough, Queensland, in 1925 and served in the Australian Air Force in PNG in the final stages of World War 2.

Jim was the best known general practitioner in Port Moresby for forty years, in the process building the largest medical practice in PNG before 1999. He was a robust, avuncular and generous man – who often led us to believe that there was no disease known to mankind that penicillin could not overwhelm.

He also was the first rugby league official to be knighted (by the PNG Government in 1991) for his service to rugby league after earlier being awarded the OBE.

He was the first president of the PNG rugby league in 1964 and during his time in this role rugby league prospered and PNG became the only nation in the world to regard it as its national sport.

Jim moved to Brisbane in the mid 1990’s and continued to work as a locum until two years ago.

Rugby league in PNG today would not be the strong national sport it is today without his leadership and commitment. His passing will not only cause sadness in rugby league in PNG – he will be greatly missed by the nation’s political and community leaders, and the countless thousands of Papua New Guineans patients who benefited from his generosity over the best part of forty years.
THE 2010 MEDICAL SYMPOSIUM TO BE HOSTED BY ANGAU MEMORIAL HOSPITAL, LAE CITY, MOROBE PROVINCE
Never! Never AIDS Forever... Family

Sunshine to Papua New Guinea

Beauty of AIDS... 100% Avoidable!