Paediatric Society of Papua New Guinea

Symposium 2019

Venue: School of Medicine and Health Sciences

August 28th to 30th

Conference programme and abstracts

Day 1. Wednesday August 28th

TIME	ACTIVITY	PRESENTER / FACILITATOR
0800-0830	Registration	Dr Gwenda Anga and Dr Martin Saavu
Session 1	**Opening formalities**	**Chair: Dr Kone Sobi**
0830-0840	Welcome and Order of the day	Dr Cornelia Kilalang
0840-0845	Opening prayer	TBA
0845-0900	Welcome address	Dr James Amini and Dr Mathias Tovilu
0900-0930	Keynote address	TBA
0930-1000	**TEA BREAK**	
Session 2	**DCH and MMed research presentations**	**Chairs: Dr Francis Pulsan and Dr Temane Korowi**
1000-1025	A 5-month audit of deaths and outcomes in Mt Hagen Paediatric Department	Dr Clyde Kamo - Mt Hagen (DCH)
1025-1050	Audit of the management of severe pneumonia in children at Nonga Hospital	Dr Dasha Pomat - Rabaul (DCH)
1050-1115	Congenital syphilis in neonates with VDRL positive mothers at National Referral Hospital, Honiara	Dr Maxon Lifigao - Solomon Islands (DCH)
1115-1140	KMC amongst preterm and low birth weight neonates at Modilon General Hospital	Dr Wilma Luan - Madang (DCH)
1140-1205	The incidence of child neglect at Modilon General Hospital	Dr Allanie Rero - Madang / PMGH (MMed)
1205-1230	A review of birth defects among 1000 consecutive live births at Milne Bay PHA	Dr Rupert Marcus - Alotau / PMGH (MMed)
1230-1240	Discussions and recommendations	
1240-1330	**LUNCH BREAK**	
Session 3	**Paediatric training and Workforce needs**	**Chairs: Dr Paulus Ripa and Dr Rose Morre**
1330-1350	Paediatric training update	Prof John Vince
1350-1410	Child health workforce needs	Dr James Amini
1410-1430	Paediatric nursing training: where are we now?	Ms Gebo Nanu
1430-1450	Does our PBL curriculum prepare RMOs for paediatric practice in PNG?	Dr Francis Pulsan
1450-1510	Post-graduate Paediatric Training Committee: an update	Dr Paulus Ripa / Prof Trevor Duke
1510-1530	First year as a Provincial Paediatrician: swimming, staying afloat or drowning?	Dr Maylin Kariko
1530-1550	What can be learnt from paediatric practise abroad: experience in Melbourne	Dr Rosemary Kipalan
1550-1610	Discussions/Recommendations	
1610-1630	**TEA BREAK**	
1630-1645	Simbu Children's Foundation (NGO): Plans to expand to other provinces	

1645-1700	Recommendations Day 1	Dr Martin Saavu and Dr Mathias Tovilu
1700	End of Day 1	

DCH candidates presentations

Kamo C. A 5 month audit of deaths and outcomes in Mt. Hagen Paediatric Department

Auditing is a vital tool to improve quality of any endeavour. In patient care it is a mandatory self-assessment tool. Good auditing with regard to death auditing and reviews depends on the availability of updated credible records, a standard widely accepted auditing protocol and the objective to make adjustments and needed changes to ultimately improve patient care. Over 5 months, the paediatric team in WHPHA has been carrying out monthly death reviews based on the WHO death reporting forms with the aim of identifying common avoidable modifiable causes of deaths. Strategies can then be put in place to improve these factors. This paper looks at the effects of establishing a regular death auditing program and the implications it has for the future care of paediatric patients.

Pomat D. A systemic audit of the management of severe pneumonia in children admitted Nonga General Hospital, East New Britain Province

Childhood pneumonia is common and recent data have shown that it is the single largest infectious cause of death in children worldwide. In Papua New Guinea statistics have shown it remains the most common cause of admission in children with CFR of 9.62% in 2018 for severe pneumonia. This was a prospective study design. This systemic audit was aimed at identifying where care is adequate and where it is lacking and needs improvement in the current management practices of severe pneumonia in Nonga General Hospital, East New Britain Province. The objective of the study was to audit the clinical standard of practice of the management of severe pneumonia in children aged 1 month to 59 months at Nonga General Hospital, East New Britain Province. Children ages 1 month to 59 months with severe pneumonia according to WHO|PNG STM criteria were recruited into the study and their management practices were audited using a proforma checklist of clinical standards outlined by the Paediatric Society of PNG.

Lifigao M. Congenital Syphilis in Neonates with VDRL positive mothers at National Referral Hospital, Honiara, Solomon Islands

This presentation will discuss the incidence and clinical features of congenital syphilis, and the incidence of mothers who are VDRL positive delivering at the National Referral Hospital in Honiara, Solomon Islands.

Luan-Kasso W. Assessment of KMC amongst preterm and LBW neonates at Modilon General Hospital, Madang Province

Kangaroo Mother Care (KMC) was introduced to Modilon General Hospital in 2015 but there were many implementation challenges due to limited resources and a limited level of a supportive and enabling environment. **Aim:** To assess the impact of intermittent KMC on preterm/low birth weight neonates on discharge outcomes. **Methods:** This prospective observational study included educational sessions for special-care-nursery staff and mothers about KMC. This was followed by an assessment provided to 38 neonates with birth weights between 1200-2000 grams who received intermittent KMC. **Results:** Overall, 84% were preterm with 83.3% of the newborns delivered at

health facilities with hypothermia on admission. KMC hours ranged from 0-8 hours per day. More than half absconded/leaving hospital against medical advice and 72.7% and 41.7% had weight gains of <5grams/kg/day and 10grams/kg/day, respectively. **Conclusion:** Early essential newborn care practices for preterm/low birth weight newborn and an enabling supportive environment and resources for both the health care worker and mother/career would improve the implementation of intermittent KMC.

MMed candidates presentations

Rero A. Incidence of child neglect at Modilon General Hospital, Madang

Neglect is an often overlooked form of child maltreatment even though it can have as serious a consequences as other forms of child maltreatment, and result in death or permanent poor health throughout life. Between March 2017 and December 2017 there were a total of 231 patients admitted to the Paediatric ward, 91 of whom fulfilled the criteria for neglect. For the purpose of this study, child neglect was defined when a child's basic developmental and health needs have not been met by acts of omission by parents or guardians, leading to ill health and hospitalization. From those that were neglected 30 (33%) of children were adopted compared to 3 (3.3%) of those not neglected, bottle fed 21 (23.1%) from 4 (4.4%), unvaccinated 41 (45%) from 17 (18.7%) respectively. In the neglected group severe acute malnutrition 42 (46.2%), followed by tuberculosis 26 (28.6%) and acute gastroenteritis 12 (13.2%), was the leading cause of hospital admissions, while malaria, pneumonia and anaemia were the leading causes in the non-neglect group. Mortality was high in the neglected group with a case facility rate of 23%, with severe acute malnutrition accounting for 9 of the 21 deaths (43%). Associated with neglect were financial stress 25 (28%), parental issues 23 (25%), ignorant parents 15 (17%), closely spaced pregnancies 13 (14.3%), domestic violence 4 (4.4%) and a disabled child 3 (3.3%).

Marcus R. A review of birth defects among 1000 consecutive live births at Milne Bay Provincial Hospital between February and August 2018

Background: Birth defects contribute 7-10% to neonatal mortality, worldwide 2.3 million children survive each year with lifelong disabilities from birth defects and 90% of birth defects occur in developing nations. Data on birth defects from developing countries such as Papua New Guinea are scarce. However it is important to have available and reliable data on the incidence and description of birth defects to enable correct health strategies for prevention and management. In this study we describe the profile of birth defects seen in a birth cohort in a provincial hospital in Papua New Guinea, a low-middle income country in the Western Pacific Region. **Aim:** To describe the specific types of birth defects in the cohort, to identify possible risk factors, and to direct prevention measures. **Methods:** Between February and August of 2018, a thousand live deliveries were assessed for birth defects. From this a descriptive analysis as well as a prospective case control study was carried out at Milne Bay Provincial Hospital with cases identified and described by the use of the World Health Organization Classification of Disease (ICD-9). Controls were compared with cases utilizing pretested questionnaires. **Results**: In this study the incidence of birth defect was 28/1000 live births. Defects of the nervous system was most common with 17.9% of cases followed by cardiovascular, genitourinary, ENT and musculoskeletal defects which all comprised 14.3% each. Some characteristics were more represented in cases compared to controls, including maternal age <19 years (OR: 11.9), maternal smoking (OR: 3.8) and lack of folate supplements (OR: 3.5), however, in this relatively small sample of birth defects these were not found to be statistically significant. **Conclusion**: Birth defects will increasingly play a major part in child mortality and morbidity in developing nations such as Papua New Guinea. Strategies in family planning, adolescent health,

maternal health care and folate supplementation/fortification appear important in Papua New Guinea, however, more conclusive evidence is required.

Paediatric training and workforce needs

Vince J. Postgraduate training in Child Health: A Crisis?

Currently we have only two Papua New Guinea candidates in the DCH programme We have 8 candidates in the MMed part 1 programme of whom 5 or 6 will sit the exams in October. We have 17 candidates in MMed part 2 of whom 4 are from Pacific Island Countries. Only two of the 13 PNG Part 2 candidates are scheduled to sit the exams this year. Of the others, perhaps 4 might be ready to sit the exams in 2020. Over the next 5 years, some of our colleagues will be leaving the Child Health service after many years of dedicated service and some will move into administrative positions. We are still far short of our objective of having at least 2 Paediatricians in each province. The training programme at present is a minimum of 5 years from entry at DCH. So far we have only two applications to enroll in DCH in 2020. It is vital that we have more postgraduates entering and continuing in the programme. This means actively recruiting young, interested doctors in the later stages of their training and in residency, and we have to ensure that they are nurtured through the training years.

Amini J. Child Health Workforce needs

As per National Health Minimum Standards on specialist (paediatrician) manpower requirement for hospitals, there must be a minimum of two paediatricians in all provincial hospitals and five in Level 1 hospitals (PMGH). In addition there is a need to train young paediatricians in subspecialty areas and a need for young paediatricians to take on academic roles in teaching and research. If the minimal standards are to be reached it is imperative that a minimum of 6 DCH candidates enter the programme each year and continue into MMed training. In the longer term, the National Health Plan envisages the establishment over a time frame of 20 years of four regional hospitals with PMGH or a new hospital as a National Referral Hospital offering high quality tertiary level services. This will require a workforce of at least 60 practicing paediatric clinicians. Child health nursing need a major increase in resources. Previously there were three post-graduate child health nursing courses in PNG, now there is only one, at the SMHS. So more post-graduate programmes in child health nursing are needed; one in each region.

Gebo N. Nursing education: Bachelor Clinical Nursing, Child Health Division, School of Medicine & Health Sciences, UPNG. Where are we now?

Background: Nursing Education in BCN-CH was introduced in 19th century under National Department of Health but had gone through many changes and challenges in life of nursing education today. Furthermore, the presenter will share what had being in the past, now and future using a descriptive approach.
Aim: The aim of this presentation is to share the experience of what had being in the past, current and future of BCN-CH during medical symposium.
Method: Qualitative method of looking at the experience of nursing education trend in BCN-CH Past, current and future at the Division of Nursing, School of Medicine and Health Sciences, University of Papua New Guinea.
Use of an experience in nursing education will be a focus on the past, current and future during this presentation.
In conclusion, it is anticipated that input from this presentation will benefit an individual and professional development in future.

Pulsan F. Vince J. Does a Problem Based Learning Curricular prepare Resident Medical Officer for Paediatric Practice in PNG?

The problem based learning curriculum for the MBBS programme has been in place for almost 20 years, and whilst opinions have been expressed as to how well it prepares the students for clinical practice there have been no studies to explore the issue. Our research attempted to start addressing this knowledge gap using questionnaires completed by Resident Medical Officers and their supervisors. Questions were based on items covered in the internationally recognised and validated Preparation for Hospital Based Practice Questionnaire (PHPQ) .The results were encouraging and suggested that the current undergraduate training programme prepares the students for Residency reasonably well.

Ripa P, Duke T. Post-Graduate Paediatric Training Committee: An update

At the 2018 Paediatric Society meeting Paediatric trainees and provincial supervisors led a discussion on training needs for registrars. A subcommittee was formed to collate and make recommendations based on these discussions. Review included clinical case training, research methodology, ward rotations at PMGH, diagnostic skill acquisition in modalities such as radiology, short intensive courses, and procedural trainings such as central venous line insertion and management training. Recommendations from the subcommittee will be discussed and a proposal that this should be a permanent subcommittee with oversight over continued improvements in training.

Kariko M. First Year as a Provincial Paediatrician: Swimming, Staying Afloat or Drowning?

My name is Maylin Kariko and I am currently the Paediatrician working at Kavieng General Hospital, New Ireland Provincial Health Authority. I started here in March this year and it has been a very new experience as well as a challenging one. No one really tells you the real challenge you are in for apart from the usual, “there is a consultant position available and they are looking for a Paediatrician, why don’t you apply for it?” Well that is how I got here. Enthusiastic and a little anxious I took up the post in New Ireland. I arrived on the scene after the outgoing Paediatrician had already left, so basically there was no proper handover, takeover and the rest was history. Basically I will be sharing my experience and how I am currently striving to survive the challenges and demands I am faced with, whether it is swimming, staying afloat or drowning.

Kipalan R. What can be learnt from Paediatric Practice abroad: Experience from The Royal Children’s Hospital – Melbourne, Australia

In 2017, I was privileged to be given the opportunity to work at the Royal Children’s Hospital (RCH) in Melbourne Australia. This was facilitated through the Centre for International Child Health in Melbourne, and funded by the RE Ross Trust (Roy Everards Ross), which is a charitable organisation established in Victoria in the 1970’s. I am one of many who has benefited from this organisation by working as a Rotating registrar at the RCH for a period of 2 years. During this time I have learnt and have been exposed to new medical, social and environmental experiences that I believe have helped me grow and be able to contribute as an individual, a Doctor and a Paediatrician in Papua New Guinea, of which I will share.

Drekore J. The Simbu Children's Foundation, an NGO: Plans to expand to other provinces

Simbu Children Foundation (SCF) is a volunteer humanitarian organization that assists and supports sick children from the rural communities, especially in the Simbu Province. SCF works in partnership with Sir Joseph Nombri Memorial Kundiawa General Hospital (SJNMKGH).
Port Moresby General Hospital (POMGEN) is the country's major referral hospital unfortunately Simbu does not have road access to Port Moresby. Since majority of the Simbu people live in the rural communities, it is a real dilemma for a patient (an ordinary villager) to afford to fly to Port Moresby. SCF believes many patients especially children die in silence in the villages and hamlets. It is in this context that SCF is set up to sponsor sick children from village parents to giving them hope and second chance in life when referred to POMGEN such as Operation Open Heart (OOH).
Apart from sponsoring cardiac patients to the annual OOH, SCF has initiated & sponsored the Osteomyelitis Research which recently got published in the International Journal of Pediatrics, *Methicillin-Resistant Staphylococcus aureus in Melanesian Children with Haematogenous Osteomyelitis from the Central Highlands of Papua New Guinea*. Published 22nd May 2018, International Journal of Pediatrics. SCF's partnership with SJNMKGH is an example of mutual friendship and collaboration between civil society and government institution caring for health and contributing to the medical knowledge and progress.

Day 2, Thursday August 29th

0800-0810	Opening prayer	TBA
Session 4	**National Child Health Programs**	**Chairs: Dr Gilchrist Oswyn and Dr Sharon Kasa-Tom**
0815-0830	National Health Plan 2021-2030: KRA 4 what has been put forward?	Dr James Amini and Dr Mobumo Kiromat
0830-0850	Child Health Plan 2021-2030: aligning with the NHP and the SDGs	Dr James Amini and Prof Trevor Duke
0850-0910	EPI Program: polio outbreak and vaccine-preventable disease surveillance	Dr Deborah Bettels and Mr Barry Ropa
0910-0930	Nutrition program update	Mrs Eileen Dogimab and Dr Michael Landi
0930-0950	Malaria update	Dr Moses Laman
0950-1000	Child abuse and neglect	Dr Mary Paiva
1000-1010	Child abuse cases and management: Kundiawa Hospital	Ms Jean Kupo
1010-1030	Discussions and Recommendations	
1030-1100	**TEA BREAK**	
Session 5	**National Child Health Programs**	**Chairs: Dr Dale Frank and Dr Kunera Kiromat**
1100-1145	Paediatric HIV update	Dr Gamini Vali
1145-1215	Prevalence of HIV in HIV exposed babies less than 18 months by PCR at PMGH, 2015-2017	Sr Esther Pisoro
1215-1245	PPTCT program in Western Highlands: Is it time for GeneXpert testing?	HEO Petrus Kombea and Dr Paulus Ripa
1245-1300	Discussions/Recommendations	
1300-1400	**LUNCH BREAK**	
Session 6	**National Child Health Programs**	**Chair: Dr Mary-Julian Baki**
1400-1420	Neonatal Care: Early Essential Neonatal Care so far in PNG	Mrs Freda Sui and Dr Roland Barnabas
1420-1440	Kangaroo Mother Care: Western Highlands PHA	HEO Monica Possa and Dr Magdalynn Kaupa
1440-1500	Healthy Mothers, Healthy Babies: implications for newborn heath and post-natal care	Burnett Institute
1500-1515	Discussions and Recommendations	
1515-1535	**TEA BREAK**	
1535-1545	What can we learn from Randomised Controlled Trials in 2019?	Prof Trevor Duke
1545-1600	Recommendations Day 2	Dr Martin Sa'avu and Dr Mathias Tovilu
1600-1700	**Paediatric Society of PNG AGM 2019**	Dr James Amini

National Child Health Programs

Amini J. Kiromat M. National Child Health Plan 2021-2030: KRA 4. What has already been put forward?

The areas that have been proposed for Key Result Area 4 (Improve Child Survival) in the next 10 years of the National Health Plan are:

- Increase coverage of childhood immunization in all provinces and districts
- Reduce case fatality rates for pneumonia, diarrhoea, malnutrition, tuberculosis, malaria, and other common acute and chronic illnesses in children, through a program to improve the quality of paediatric care in all provinces
- Improve the outcomes in childhood TB
- Improve the outcomes in HIV in children
- Decrease neonatal deaths
- Reduce moderate and severe malnutrition in children under the age of five years
- Implement Adolescent Health Services in all provinces
- Human Resource for child health

Amini J. Duke T. Child Health Plan 2021-2030: Aligning with NHP and the SDGs

The Child Health Plan, produced in 2009 was a blue-print for implementation of child health programs, and it aligned with the WHO Regional Child Survival Strategy and the MDG targets. It was reviewed and updated in 2015, and it was encouraging to see that the majority of the aims of the Plan had been achieved. With the coming decade 2020-2030 there is a need to update the Child Health Plan. The contents of the 2015 plan were forward thinking and anticipated the SDGs and paediatrics in the current era. In revising the 2020-30 Child Health Plan there is a need to take into account the changing epidemiology of child health in PNG, to further emphasise disease prevention, non-communicable chronic conditions in children, neonatal care, outcomes beyond survival including all aspects of development, quality of care, adolescent health, and address residual infectious disease burdens, complexities and comorbidities. We welcome input from all paediatricians for this revision.

Bettels D. Kupe F. Expanded Programme Immunisation: PNG Response to the out-break of cVDPV1 and Surveillance for Vaccine Preventable Diseases

The Government of PNG notified WHO of an outbreak of cVDPV1 on June 2018 and declared a national emergency. The National Emergency Operations Center was formed to lead the country's outbreak response activities. These activities focused on rapidly increasing immunity against polio virus and enhancing the capacity to detect polio virus. A series of immunization campaigns was implemented from July 2018 to June 2019. In total, three subnational immunization campaigns and five national immunization campaigns were implemented using oral polio vaccine (OPV). Simultaneous with immunization campaigns, enhanced Acute Flaccid Paralysis surveillance was initiated.

Dogimab E. National Nutrition Programme: An Update

Integrating Severe Acute Malnutrition indicator: Mid-Upper Arm Circumference, Monitoring and Supervision Checklist into National Health Information, Monitoring and Supervision Systems. Weight-for-Age Percentile has always been used by the National Health Information System as a nutrition indicator to identify malnutrition. MUAC was not used although recommended by World Health Organisation' revised guidelines for management of Severe Acute Malnutrition, 2013. By

2018, MUAC was included into the National Health Information System that is also officially launched. While using the MUAC, there has been steady increase in the number of children identified and treated of Severe Acute Malnutrition (SAM). The new National Health Plan, 2021 – 2030, process has begun and is an opportunity to absorb all other relevant SAM indicators in a stand-alone nutrition module, and subsequently by the National Health Information System at the next revision stage.

Integrating nutrition supplies (including Ready to Use Therapeutic Food) into the PNG Medical and Dental catalogue, procurement and distribution

Following UNICEF's technical support and advocacy, all relevant nutrition supplies have been integrated into the PNG Medical and Dental catalogue, 11th edition of 2019. During the period of advocacy, US$1,730,029 has been spent on the nutrition supplies with near equal contribution from UNICEF and Government. Now that the nutrition supplies are included in the catalogue, each province and health facilities will be responsible for placing their orders through their AMS through NDOH Medical Supply Branch for procurement.

Establishment of PMU Nutrition at the Department of National Planning and Monitoring

The Project Monitoring Unit Nutrition has been established and taking momentum and recognition by the Minister for Planning and has appointed the Vice Minister Planning to be responsible for the WASH, Nutrition and Population Programs.

With support from UNICEF, HR Training and Nutrition is in the process to review the content of Diploma in General nursing and CHW curricula to update SAM and IYCF contents.

Laman M. An Update on Malaria in PNG: PNG Institute of Medical Research, Madang

Recent surveys suggest a resurgence of malaria in PNG. Although stock-outs of antimalarial drugs and other essential drugs has been considered the primary reason for this, many other factors of concern such as low bioefficacy of bednets and changing vector behaviour patterns have been recently documented. Furthermore, an emergence of artemisinin-resistant Plasmodium falciparum with Kelch13 C580Y mutation has been documented in PNG but therapeutic efficacy studies to date have shown no delayed parasite clearance. Details of these will be presented.

Paiva M. Child Abuse and Neglect

Child Abuse is an under-reported diagnosis in our clinical setting, with limited interventional approach accorded to it. Two main interventional approaches have been identified to address this dilemma. The first interventional approach is the health facility interventional approach. This will be directed at addressing the epidemiology of child maltreatment including additional data which will be required at health facility level, management of affected child, and prevention strategies for individual vulnerable families. Secondly, community based interventional approach will focus on providing and establishing child safety and protection practices with assistance from civil and government sectors, schools, churches and various community bodies.

Kupo J. Child Abuse Cases and Management: Family Support Centre, Kundiawa Hospital

Family Support centre is a multi-agency point for women and children who have been subjected to any form of violence within homes and families, sexual violence and child abuse. It provides long and short term case management, services and referral pathway addressing children who have been subjected to Gender Base Violence in a holistic approach and team work.

The goal of stopping and preventing violence implies that services should not withdraw after emergency interventions. Survivors of violence need services that provide advocacy and support on

a long term basis, accompanying them through all the processes and coordinating the interventions. Survivors are referred to long term support services as standard procedures.
The presenter is an experience nurse who is also a qualified social worker majoring Mental Health Psychology and Human rights defender and as delivered professional services and improve service delivery in the province.

Vali G. Paediatric HIV: An Update

It has been recognised worldwide including PNG, that there is increasing resistance to first line anti-retroviral therapy (ART) drugs especially the NNRTIs in both the adult and the paediatric population. The PNG guidelines have being aligned with the new WHO treatment guidelines that is transition of non-nucleoside reverse transcriptase (NNRTI) -based to Dolutegravir (DTG) –based ART. With the aim of achieving the UNAIDS 90-90-90 target, as well as sustainability of Paediatric ARTs. Viral Load monitoring in children should be scaled up to achieve these targets. Also more emphasis should also be focused on training of paediatrician and other health care workers on PPTCT, new treatments of opportunistic infection and the management of co- morbidities to provide the comprehensive quality care in the Paediatric HIV or Paediatric HIV exposed population in PNG.

Pisoro E. Prevalence of HIV in HIV exposed babies less than 18 months by PCR at PMGH, 2015-2017

In Papua New Guinea HIV is considered to be a major public health issue but little is known about the prevalence of HIV on HIV exposed babies under 18months. **Aim** to describe the recorded demographic characteristics and infant feeding information of HIV exposed babies and their mother, to determine the prevalence of HIV among HIV exposed babies under 18 months on first, and second Dry Blood Spot (DBS) and human immunodeficiency virus (HIV) antibody confirmatory test and to determine if any of the demographic or infant feeding characteristics at age of 6-11 months is related to the babies' HIV status. **Method** As part of quantitative retro prospective hospital based surveillance was under taken with randomly selected babies (under 18 months) on the southern region of Papua New Guinea. Participants were selected from those records of mothers attending the ANC, labour and delivery information from Labour ward and HIV exposed babies' clinic for 3-weeks period between (25th of May to 15th of June, 2018). **Results**: Of 2300 paediatric exposed HIV population registration, 630 (34%) exposed babies were diagnosed with HIV and 638 (23%) exposed babies diagnosed true negative at18months of age, and 185 (8%), with HIV care accounting for 1047 (46%). The HIV prevalence in HIV exposed babies under 18months on first Dry Blood spot test were 39 of 65(60%), total 53 of 65 (82%) on second DBS test and 31 of 53 (58%) on final HIV antibody confirmatory test. The mothers received low primary education were 55% was an indication of poor ART adherence and lack of understanding on infant feeding method. **Conclusions:** HIV exposed babies are at high risk of HIV transmission from parents to child during antennal, labour and delivery and postnatal period. There is an urgent need for appropriate multispectral preventive interventions such as ART adherence education and infant feeding counselling. Improved monitoring and control of HIV on HIV exposed babies is also needed in all regions across PNG.

Kombea P, Ripa P. Prevention-Parent-to Child-Transmission (PPTCT) Program in Western Highlands: Is it time for GeneXpert testing?

PPCT was commenced in Mt Hagen in 2011. A review in 2015 showed a 20% positive rate; however 33% (82/251) did not have DBS results. A review of 2017/2018 data shows that the mean turnaround time for DBS results is 4 months. This means that 33% of babies who are potentially HIV positive are left after the recommended prophylaxis period not covered with anti-retroviral and are vulnerable. It will be recommended that Gene expert testing should replace DBS testing.

Barnabas R, Sui F. Neonatal Care: Early Essential Neonatal Care so far in PNG

Since the introduction of the Early Essential Newborn Care training in 2015, the National Department of Health together with its partners UNICEF and WHO have made the commitment to roll out the programme across all provinces in the country. Training was conducted at provincial hospitals with participants from the Labour ward and district hospitals or health centres with high delivery load (25/year). As of April 2019, 91% (20/22) of all the provinces have been covered with 86% (354/413) of the facilities with high load covered and 98% (1326/1360) of the health workers trained. By June 2021, all the high delivery load health facilities across the country would be covered.

Possa M, Kaupa M. Kangaroo Mother Care: Western Highlands Provincial Hospital

KMC was introduced to Special Care Nursery Mt Hagen Hospital in October 2018. Data on newborn babies from January to June 2018 were compared with babies with LBW in same period of 2019. In 2018 156 LBW babies were admitted with 40 deaths (mortality rate of 25.6%). The average length of hospital (ALOS) stay was 7 days. In 2019 202 LBW babies were admitted. There were 31 deaths (15.3%); 10.3% reduction with RR of 0.73 (0.55 -0.97). ALOS was 3 days. KMC reduced neonatal mortality, readmissions and shortened stay. Other benefits include improved bonding and paternal involvement.

Morgan C, Scoullar MJL, and the Healthy Mothers Healthy Babies Study Team. Healthy Mothers, Healthy Babies Project in PNG

The multi-partner Healthy Mothers Healthy Babies (HMHB) research program in East New Britain addresses, among other topics, two key newborn health issues: a) being born small (the biggest risk factor for newborn mortality and stunting); b) neonatal infections that account for approximately one-third of newborn deaths in Papua New Guinea (PNG). This presentation provides an update from two HMHB studies: the Prospective Observational Cohort Study (HMHB Study1) and the Accelerating Postnatal Care and Chlorhexidine (PNC-CHX) study.
Methods: HMHB Study 1 has followed 699 pregnant women attending their first antenatal clinic at five participating facilities through to 12 months after childbirth. Assessments included collection of blood (mother/baby), urine and vaginal swabs (mother), anthropometry, and detailed interviews with mothers. PNC-CHX is an implementation research study, testing the feasibility and acceptability of improved postnatal care counselling, take-home communication tools, and umbilical chlorhexidine through five health facilities and home visits by village health volunteers (VHVs) in two catchments. It is supported by GSK, however the funder has no role in analysis or decisions to publish.
Findings: The presentation will provide an update on adverse pregnancy outcomes, including low birth weight and still birth, and prenatal threats to newborn health including maternal infections and nutritional deficits. An update on feasibility of enhanced postnatal care from PNC-CHX will also be presented, providing interim data from the 800 deliveries that have been enrolled so far.
Conclusion: HMHB findings show many babies born small or stillborn, and many women experiencing multi-morbidities in pregnancy. There are feasible low cost prenatal interventions to improve newborn health, especially when coupled with enhanced routine postnatal care for both newborn and mother.

Duke T. What we can learn from Randomised Trials in 2019?

This year 322 trial publications were identified from all regions of the world. The trials covered topics as diverse as mass drug administration with azithromycin, community treatment supporters for adolescents with HIV, how to reduce sexual assault in school-aged girls, several trials of epilepsy treatments, the best use of prednisolone and vitamin D in nephrotic syndrome, multiple trials of chemoprophylaxis to prevent malaria, chlorhexidine cord care for newborns, the benefits of active surveillance for tuberculosis, shorter preventative regimens for TB, how often albendazole should be given to reduce hookworm and the benefits of paw-paw in reducing Ascaris, the benefits of delayed cord clamping, how to grade up feeds in very low birthweight babies, and whether to give them vitamin A.

Day 3, Friday August 30th

0800-0810	Prayer	
Session 7	**Improving Quality of Hospital Care**	**Chair: Dr Jason Vuvu**
0830-0850	PHR 2018 - Child Morbidity and Mortality Report	Prof Trevor Duke
0850-0910	Clinical Governance: mortality reviews and clinical accountability in Mt Hagen	Dr Jonah Kurubi and Dr Paulus Ripa
0910-0930	CPAP in Wabag: Enga Provincial Hospital	Dr Doreen Panauwe
0930-0950	Proposal for a National Paediatric Quality Improvement program	Prof Trevor Duke
0950-1000	Discussions	
1000-1030	**TEA BREAK**	
Session 8	**Emergency Paediatrics**	**Chair: Dr Roland Barnabas and Dr Diane Olita'a**
1030-1050	Aero-Medical transfer of sick children: Safe Practice.	Dr Duncan Dobunaba
1050-1110	Advanced Paediatric Life Support (APLS)	Dr Kone Sobi
1110-1130	Discussions	
1130-1200	Recommendations Day 3	Dr Martin Saavu and Dr Mathias Tovilu
1200-1210	Concluding Remarks and END of Paediatric Program	Dr James Amini
1210-1310	**LUNCH**	
Session 9	**NATIONAL TB PROGRAM UPDATE (part of NTP meeting)**	**HOLIDAY INN HOTEL**
1400-1600	Childhood TB Updates	Dr Henry Welch and Dr Vela Solomon

Improving Quality of Hospital Care

Duke T, Yano E. PHR 2018 Child Morbidity and Mortality Report

In 2018, 18 hospitals participated in the Paediatric Hospital Reporting (PHR): 15 provincial hospitals, two rural district hospitals and one urban hospital; the highest participation since the program began in 2008. In 2018 we saw the first significant improvements in case fatality rates (CFR). The overall paediatric CFR was 6.7% compared to 7.1%-8.1% in past years. CFR for pneumonia (3.5%), and for severe pneumonia (9.6%) are also significant improvements on past years. In 2018 severe malnutrition CFR was 12.3%, down from 18-22% each year in 2010-2015. Chronic illnesses are more represented in the PHR than in the past, AFP reports are up in 2018. To achieve further improvements a National Paediatric Quality Improvement Program is needed. PHR V12 is now available and should be used from January 1 2020.

Kurubi J, Ripa P. Clinical Governance: Mortality Reviews and clinical accountability in Mt Hagen Provincial Hospital

Mt Hagen hospital Paediatric unit has seen a gradual decline in hospital case fatality rates since 2014 with the 2018 CFR at 3.5%, the lowest of the major hospitals. Among many things this improvement can be attributed to clinical governance, quality care initiatives and continued training of health staff

over the last 3 year. Regular death reviews, identifying key issues in joint sessions with all staff and improvements in management of pneumonia, severe malnutrition etc. has resulted in improvement of quality of care and decline in CFRs.

Panauwe D, Bubble Continuous Positive Airway Pressure (CPAP): Enga Provincial Hospital

Aim: To prospectively evaluate the use of Bubble CPAP in children with Severe Pneumonia and other ALRIs who do not improve with standard oxygen therapy. ***Methods:*** The Bubble CPAP machines were introduced into the province in November 2018. Children whose respiratory distress did not improve despite standard oxygen therapy were included for CPAP. ***Results:*** From November 2018 to June 2019 a total of 6 children were managed with additional CPAP therapy. 50% (3) died and (50%) 3 survived. ***Conclusion:*** The outcome of CPAP depends on co-morbidities. Some technical problems were encountered during administration of CPAP and needs readjustments.

Duke T. Proposal for a National Paediatric Quality Improvement Program

Further gains in paediatric outcomes will come more from quality improvement than from single interventions (a new drug, a new micronutrient). The components of a National Paediatric Quality Improvement Program includes strengthening existing initiatives that are fragmented or poorly supported into an overall strategy that may include:

1. A quality improvement team in each hospital
2. Mortality and morbidity audits, learning lessons and implementing changes
3. Training on WHO Hospital Care for Children
4. Intensive care areas in the paediatric wards, including improved oxygen
5. Paediatric monitoring and response charts with early warning indicators and escalation processes
6. Infection control and antibiotic stewardship
7. Improved systems for managing children with chronic conditions
8. Improved diagnostics to guide antibiotic use
9. Continuing professional development for paediatricians and nurses

A National Paediatric Quality Improvement Program would have measurable outcomes, based on the data from the PHR. These will be proposed for discussion.

Emergency Paediatrics and Specialty areas

Dobunaba D. Aero-Medical transfer of Sick Children: Safe Practices

Sobi K. Advanced Paediatric Life Support (APLS)

Kilalang C, Olita'a D, Tovilu M. Childhood Cardiology Update: Including Use of Sildenafil, ACE Inhibitors and Digoxin

Pulmonary Hypertension (PH) in children is a disease characterized by elevated pulmonary arterial pressure and can be caused by multiple aetiologies but commonly associated with lung or heart diseases. Right heart failure may result because of the increased in pulmonary arterial pressure. It is associated with a considerable risk of morbidity and mortality. Management of children with PH requires a multidisciplinary team approach with expertise in this area.

Terminology: Pulmonary hypertension (PH): is elevated pulmonary artery pressure (PAP; mean PAP >20 mmHg). Includes elevation in pulmonary circulation or pulmonary veins.
Pulmonary Arterial Hypertension (PAH): elevation of pulmonary arterial pressure > 20mmHg with normal pulmonary venous pressure.
Pulmonary Venous Hypertension (PVH): elevations of pressure in the pulmonary venous and pulmonary capillary systems (PAWP ≥15 mmHg).
Evaluation: a complete history and physical examination, electrocardiography (ECG), brain natriuretic peptide (BNP) level, chest x-ray (CXR), echocardiography and cardiac catheterisation is what's required to make a definite diagnosis of PH. Acute vaso-reactivity testing is a test given during cardiac catheterization of children with PH and it can guide therapy based on the response.
Diagnosis: A presumptive diagnosis of PH can be established on the basis of echocardiography showing elevated right ventricular pressure.
Treatment: individualised according to each patient's disease course. In addition other conventional therapies includes oxygen, diuretics, digoxin in overt right heart failure. Targeted therapy is directed at vasodilating the pulmonary arteries and this includes; calcium channel blockers (nifedipine), phosphodiesterase type 5 inhibitors (sildenafil), endothelin receptor antagonist (bosetan), prostacyclin analogues (iloprost). Therapy is based on trials in adult populations, observational studies in children and experience. High risk patients can be treated with IV prostanoids or combination of two targeted therapies. Severe refractory disease may need atrial septostomy or lung transplant. Prognosis: Five year survival for children with pulmonary hypertension is 60-70%.

Anga G. Childhood Oncology: An Update

Pediatric Oncology in 2019 has been focused in a few main areas, being;

1. Improving registrar exposure to holistic management of paediatric cancer patients.
2. Adapting new protocols.
3. Involvement in planning of cancer services at PMGH.

As recommended in the 2018 Pediatric Symposium, registrar rotation in Pediatric oncology has to be such that on completion of the Masters Medicine in Child Health, the paediatrician should be able to manage childhood cancers at the provincial hospital, this would be greatly beneficial to the patient and their families as they would be close by to their families for support.
This year, the rotation through paediatric oncology has been extended to 3 months, to allow ample time for candidates to follow through patients from diagnosis to treatment. During this time, they spend a day per week in radiology, doing USS with the radiology team. They are also able to review X-rays and CT scans with the radiology team. A day a week is spent at Pathology, reviewing blood film slides, and paediatric cancer histology slides.
They are required each week to prepare a list and take part in the weekly multidisciplinary meetings.
Apart from the above, the registrar major role in the day to day management of the patients from diagnostics, case conferences, initiating treatment or palliative care.
Apart from the initial list of cancers possible to treat, we have now included others including; Hodgkin's Lymphoma, Non-Hodgkin's Lymphoma, Neuroblastoma, Germ Cell Tumours and rhabdomyosarcoma. The ALL protocol is currently being reviewed and may be updated.
Plans are currently underway to improve cancer services, our involvement is to make sure that the services include specific needs for paediatric patients.

Paediatric Tuberculosis update – Holiday Inn, as part of the National TB Program meeting

Solomon-Mao V, Welch H. Childhood TB/MDR: An Update

Meeting with National TB Program, adult physicians, WHO and partners. 2 hours 1400-1600.

National guidelines for drug-resistant TB have been updated and an all oral regimen tentatively approved. Injectable drugs can have irreversible ototoxicity, thus, a change to safer oral drugs are an improvement. The updated long regimen will be 4 oral drugs (bedaquiline-linezolid-levofloxacin-clofazimine), and 18 months in duration (BDQ 6 months only). For patients on short course (9-11 months), the current guidelines still require use of an injectable agent. An all-oral short course regimen is possible. These and other TB updates will be discussed. The session will cover:

- Updated MDR regiments for long courses (18 months)
- Oral-regimen MDR drugs to use for short course (9 months) for an operational research project
- TB Preventive Therapy: using 3 months daily RH as an option for TB
- Levofloxacin for MDR prophylaxis