

THE OUTCOMES OF HUMAN IMMUNO  
DEFICIENCY VIRUS OF EXPOSED  
BABIES AT THE WELL BABY CLINIC-  
PORT MORESBY GENERAL HOSPITAL  
FROM JANUARY TO JUNE 2016.

Presenter: Dr Paul Wari MMed2, Child Health Candidate

# Introduction

## □ Global figures ( WHO 2014).

- More than 2.6 million children under 15 years of age are affected by HIV.
- Treatment for children has been less than that of adults.

## □ PNG HIV Prevalence. ( NDOH 2014).

- Reducing prevalence rate from 1.21 % to 1%. (Generalised)
- Paediatrics HIV babies on treatment is less than two thousand cases in PNG.

□ PMGH Paediatrics HIV services have been operating since the early 2000's.

□ PMGH WBC opened in 2009 under CHAI programme who left in 2016.

□ Where are We?



**To determine the outcomes of children exposed to HIV in the Prevention of Parent To Child Transmission Programme at the Well baby Clinic, PMGH.**

# Methodology

## 1. PPTCT PROCESS. (ANC)

- Opt In HIV counselling and testing at the PMGH PPTCT Antenatal Clinic.
- Confirmatory testing.
- PPTCT enrolment.
- Couples counselling.
- Case management and one stop treatment for the whole family.

# Labour and Delivery:

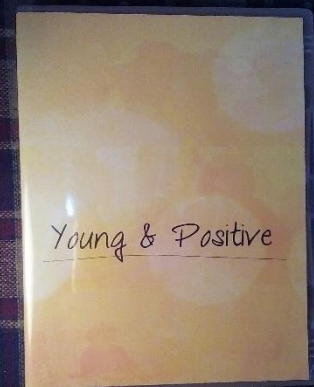
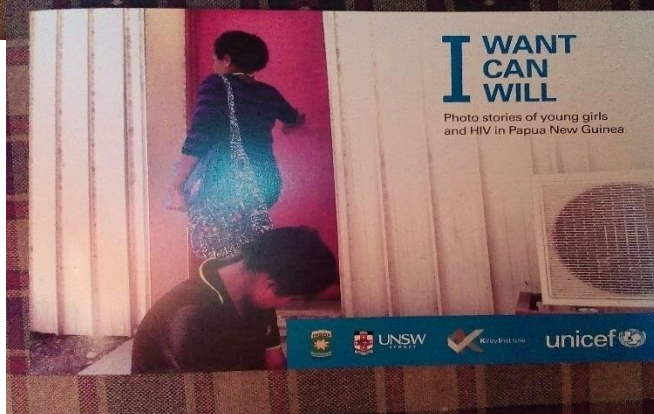
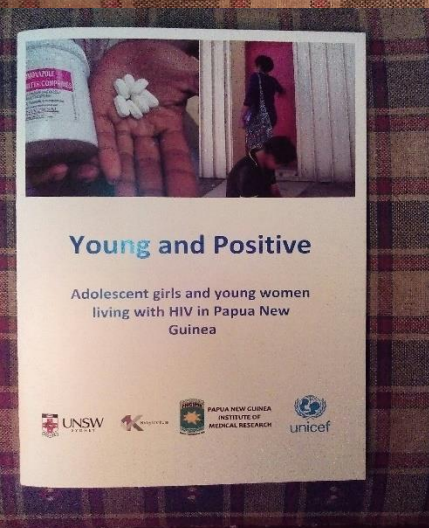
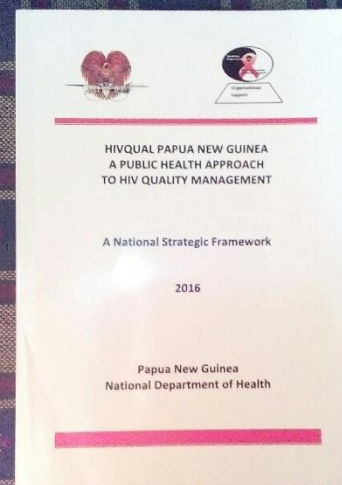
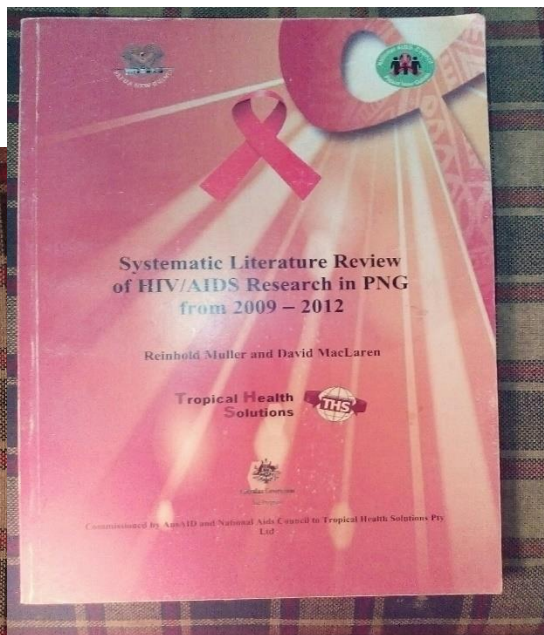
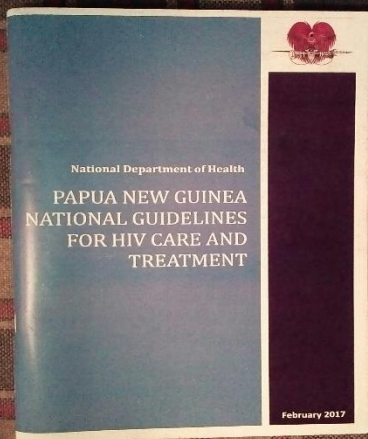
- ✓ Antiretroviral Therapy given – Nevirapine stat dose
- 
- ✓ Hepatitis B and BCG
- ✓ Zidovudine for 6 weeks.

## PAEDIATRICS FOLLOW UP:

- Dried blood spot (DBS) collection #1 – 6-8 weeks of age.
- Septrin prophylaxis started at 6 weeks of age.
- DBS #2 – Collected 2 months post breast-feeding cessation.
- Immunisation .
- Monthly follow ups.
- Final RDT at 18 months of age prior to discharge.

# PPICT

# Tools





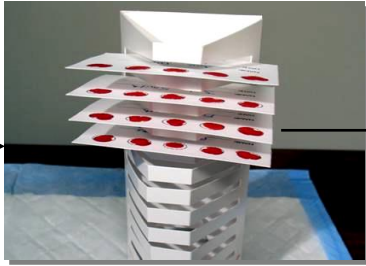
# Results Turn-Around-Time



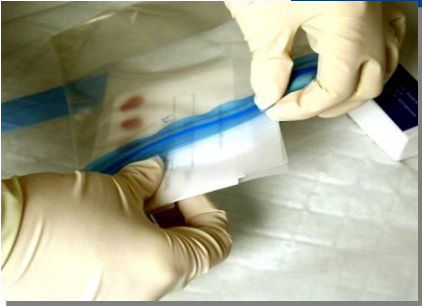
**Sample Collection**

ART/PMTCT centre

< 1 day  
Drying



< 5 days  
Accumulation of DBS



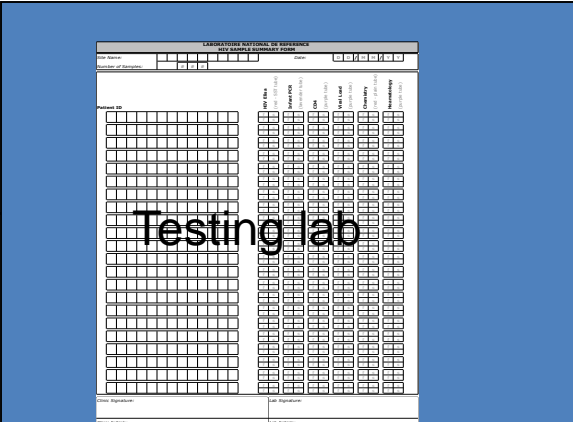
**GOAL: 2 Weeks**  
Turnaround time to receive  
of results



Transport samples to CPHL Lab

1-3 days

PCR reception and testing at CPHL lab



Testing lab

<5 days

1 day



Results returned to site



## **2. Study Duration.**

- ❖ Descriptive study on PPTCT babies from January to June 2016 and followed up over 18 month period at the WBC, PMGH, NCD, PNG.

## **3. Data Collection.**

- ❖ Casefiles
- ❖ Clinic Books
- ❖ Excel spreadsheet.

## **4. Inclusion criteria.**

- ❖ Babies born to booked mothers.
- ❖ PCR DBS done at 6 weeks of age.
- ❖ DBS Two done post cessation of breast feeding.
- ❖ RDT HIV test at 18 months.

## **5. Exclusion Criteria**

- ❖ Transferred out
- ❖ Unbooked mothers.

## **6. Analysis of data.**

- ❖ Windows Excel.
- ❖ SPSS (Final Write up )

## **7. Ethical clearance.**

PMGH Hospital Administration, NCD PAC Secretariat and UPNG SMHS.

## **8. Financial implications.** – Nil.

# Results: Demographics

Variable			
Total analyzed		135	
Gender	Males	65	
	Females	70	
Length of follow up (months)		18	
Education Status. (Mothers).		No education	20%
		Primary education	70%
		High school.	10%
Population		NCD URBAN	80%
		CENTRAL	20%

Variable (n = 135 )			
Nevirapine (NVP).		118	(87%)
Zidovudine (AZT) x6/52		135	(100 %)
Feeding choices	Exclusive breast feeding	58	(42%)
	Formula feeds	25	(19%)
	Mixed feeding	40	(30%)
	Unknown	12	(9%)

Variable (N=135)		
Isoniazide Prophylactic Therapy (IPT).	Done	95 (70%)
Mum on HAART prior to pregnancy.	Yes	124 (92%)
	No	11 (8%)
Dad on HAART.	Yes	48 (38%)
	No	87 (62%)

# Results- Early Infant Diagnosis and RDT HIV

	<u>Results (n=135)</u>	<u>6-8 Weeks (DBS#1)</u>	<u>6-8 months (DBS#2)</u>	<u>18 months.</u>
<u>DBS -PCR</u>	<b>Positive</b>	14 (10%)	-	
	<b>Negative</b>	85 (63%)	45 (33%)	
	<b>Not done</b>	36 (27%)	90 (67%)	
		-		
<u>RDT HIV</u>	<b>Positive</b>			14 (10%)
	<b>Negative.</b>			30 (22%)
	<b>Not done</b>			91 (68%)



# Results - Overall Outcomes

<u>N=135</u>	<u>Number</u>	<u>Percentage</u>
Discharged	30	22%
Positive in care.	14	10 %
LTFU	85	63 %
Died	6	5%

# DISCUSSION.

## 1. Education

- ✓ 90 % Had less than a primary school education.
- ✓ Vulnerable population.

## 2. Feeding Options

- EBF 58%
- Cheaper for mothers

# Effect of Maternal ART on Breast Milk Transmission

Taha T, et al. 16<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009. Abstract 92

2318 infants not infected after 14 weeks of NVP prophylaxis during breast feeding

130 infected during the subsequent period of breast feeding

Mothers CD4 <250  
Not on ART  
52 infections in 494.4 person-years of breast feeding

Mothers CD4 <250  
On ART  
6 infections in 288.1 person-years of breast feeding

Mothers CD4 >250  
Not eligible for ART  
72 infections in 1067.9 person-years of breast feeding

Rate = 10.5

82%  
reduction!

Rate = 2.1

Rate = 3.7

## Discussion

### 3. Pending DBS and RDT Results

- EID #1 – 27 % , EID # 2 -67% and RDT HIV – 68 %

#### REASONS:

- ✓ DBS machine breakdown
- ✓ Manpower employed by donor partners
- ✓ Lack of Reagents and strips
- ✓ Lack of clinical manpower in the WBC.

## Discussion

### 4. Lost to Follow Up

- 63 % rate.
- Inclusive of all that were not able to have the final RDT HIV test done.
- High rate compared to what Kelly – Hanku et al (2015), LTFU rate of 38%, found in their IMR study of the programmes in Goroka and PMGH in 2015.

# LIMITATIONS

1. Short study and was not able to capture all the ANC data.
2. Clinical data not available
3. Need to capture the Unbooked mothers.



# Recommendation.

## □ NDOH

- ✓ Permanent PPTCT team appointed in FHS/HIV Units.
- ✓ Implement National PPTCT Guidelines.
- ✓ Roll out Nationwide PPTCT programme.
- ✓ Employ more skilled staff at the EID/PCR Laboratory in CPHL PMGH.
- ✓ Reopen the EID Laboratory in EHPHA, Goroka.

# Recommendation.

## □ PMGH

- ✓ Permanent PPTCT SMO
- ✓ Address LTFU through networking with NGO's
- ✓ Increase staffing capacity
- ✓ Stand alone facility like Heduru to increase couples counselling and testing.
- ✓ Point of Care testing.

# Acknowledgement

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- PMGH SMOs and Dr K.Sobi
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- My PMGH Registrar Colleagues
- Late Dr Wendy Pameh
- My Family
- Professor Trevor Duke.
- PNG Paediatricians.

# References

- UNAIDS 2014.
- NDOH HIV Surveillance Unit .
- CHAI PNG
- Andy et al. – Couples counselling in Goroka Hospital.(2013)
- Andy.C, Frank.D, Mondurafa.E, Wari.P – Compassionate Care(2009).
- PNGIMR.