

# Paediatric Society of Papua New Guinea Mid –Year Symposium 2022



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# Introduction

- CHAC of NDOH continues to release **Annual Report on Child Morbidity & Mortality in PNG** since the Paediatric Hospital Reporting Systems was introduced into the country
- **Committee** believes:
  - Data & recommendations be read by all health workers & health administrators
- It is only by examining health outcomes that we can improve our services
- **Recommendations** - cover clinical & public health solutions that can result in many more children's lives being saved each year

# Paediatric Hospital Reporting System – Brief Background

## The Paediatric Hospital Reporting (PHR) System:

1. Computer based (software) program
2. Record admission and death rates
3. Monitor trends and impacts of diseases overtime
4. Sought for better action to safe and preserve lives from unnecessary admission and/ or deaths

# Purpose

Paediatric Hospital Reporting (PHR) was introduced to:

1. Standardize hospital statistics
2. Understand disease burdens
3. Monitor mortality rates
4. Quality of care

# Con't!

## Program records:

1. All admissions
2. Common diagnoses in sick children
3. Outcomes (**Deaths/Discharged**/Transfer/Absconded)

# The Program

- Produces standardized reports and calculates case fatality rates.
- Diagnostic classifications used are:
  1. Consistent with **ICD-11** classification system
  2. **WHO Guidelines**
  3. **PNG standard treatment** classification systems



# PHR Data Sheet - Paediatric

## Paediatric Hospital Reporting data form

Admission date

Hospital no

Name

DOB  Age  Sex  M  F

Province

District

Village

Vaccinations  Fully immunised for age  Partially immunised for age  Unvaccinated

Referred in  Yes  No Referred from

Outcome  Survived to hospital discharge  Died  Transferred out  Absconded

Readmission  Yes  No

Anaemia  Yes  No

SpO<sub>2</sub>  %

In hospital complications  Hospital Acquired Infection  Intravenous complications

Complications other

HIV  Negative  Positive  Not tested

Date of discharge/transfer/death

Nutritional state Wt  kg  Weight for age greater than -2 standard deviations (good weight)  Weight for age between -2 and -3 standard deviations (underweight)  Weight for age less than -3 standard deviations (severely underweight)

Mid Upper Arm Circumference  mm

### Respiratory

- Pneumonia - severe  Bronchiolitis  Croup  Asthma  Acute otitis media  Respiratory other
- Pneumonia - non severe  Whooping cough  Bronchiectasis  Chronic serous otitis media
- COVID-19 acute respiratory infection

### Gastrointestinal

- Acute watery diarrhoea  Dysentery  Malnutrition - Marasmus / kwashiorkor  Iron deficiency  Beri beri
- Persistent diarrhoea  Cholera  Vitamin A deficiency  Typhoid  Hepatitis
- Pigbel  Gastrointestinal Other

## Neonatal Hospital Reporting data form

Admission date

Hospital

Hospital no

Name

DOB

Age

Estimated age

Province

District

Village

Referred in

 Yes  No

Referred from

Sex  M  
 F

Born before arrival / Home birth

Yes  No

Prematurity < 37 wks

Yes  No

SpO<sub>2</sub>

%

HIV

Negative  Positive  Not tested

Anaemia

Yes  No

Readmission

Yes  No

Birth Weight

- >2500 grams  
 1500 - 2500 grams  
 1000 - 1499 grams  
 <1000 grams

Weight

grams

Neonatal vaccines given

- Hepatitis B  
 BCG

Neonatal infections

- Pneumonia  Skin sepsis  Congenital rubella syndrome  Neonatal infection - other  
 Meningitis  Congenital syphilis  Neonatal tetanus





# Summary Data Sheet

A Summary Data Sheet is generated **automatically** for any selected time period (e.g. **annually** or monthly) describing:

- Admissions
- Deaths
- Case-fatality rates

*For:*

1. Common diseases
2. Co-morbidities
3. Vaccine-preventable diseases
4. Age-specific mortality rates

# Summary (Automated) Data Reporting - Paediatric

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Format Records Scripts Window Help

**Paediatric Summary**

Search from 1/1/2021 Search Search to 31/12/2021

	Admissions	Total Deaths	Case Fatality Rate		Admissions	Total Deaths	Case Fatality Rate
<b>Total</b>	1421	80	5.6 %	<b>HIV</b>	39	8	20.5 %
<b>Pneumonia</b>	406	22	5.4 %	Number of HIV exposed patients	25	4	16.0 %
Severe pneumonia	116	20	17.2 %	Proportion of HIV patients on ART	19	0	%
Bronchiolitis	91	1	1.1 %	Proportion of HIV patients on Cotrimoxazole	12	.8	%
Asthma	16	0	0.0 %	<b>Malnutrition</b>	Admissions	Total Deaths	Case Fatality Rate
<b>Diarrhoea (all cases)</b>	246	19	7.7 %	Severe malnutrition	324	23	7.1 %
Dysentery	23	1	4.3 %	Moderate malnutrition	161	23	14.3 %
Cholera	0	0	? %	Vitamin A deficiency	1	0	0.0 %
Typhoid	21	1	4.8 %	<b>Vaccine preventable disease</b>	Admissions	Total Deaths	Case Fatality Rate
<b>Malaria</b>	180	9	5.0 %	Measles	0	0	? %
<b>Anaemia</b>	253	43	17.0 %	Rubella	0	0	? %
Iron deficiency	2	1	50.0 %	Whooping cough	3	0	0.0 %
<b>Meningitis / Encephalitis (all cases)</b>	66	9	13.6 %	Tetanus	1	0	0.0 %
<i>S. pneumoniae meningitis</i>	8	1	12.5 %	Acute Flaccid Paralysis	1	0	0.0 %
<i>H influenzae meningitis</i>	2	1	50.0 %	Pigbel	0	0	? %
<i>Neisseria meningitidis</i>	2	0	0.0 %	Fully immunised	434	% Fully immunised	37.09 %
<i>Cryptococcal meningitis</i>	1	0	0.0 %	Partially immunised	647	% Part immunised	55.3 %
Japanese encephalitis	0	0	? %	Unvaccinated	89	% Unvaccinated	7.61 %
Encephalitis other	3	1	33.3 %	<b>Child protection</b>	0	0	? %
<b>Severe sepsis / septic shock</b>	62	35	56.5 %	Trauma	6	0	0.0 %
<b>Dengue fever</b>	2	0	0.0 %	Cancer	3	2	66.7 %
<b>COVID 19</b>	1	1	100 %	Rheumatic fever / Rheumatic heart disease	3	1	33.3 %
<b>Tuberculosis</b>	192	18	9.4 %	Congenital heart disease	30	4	13.3 %
Pulmonary TB	102	5	4.9 %	Endocrine problems	0	0	? %
Extra pulmonary TB	90	13	14.4 %	<b>Neurology and development</b>	Admissions	Total Deaths	Case Fatality Rate
CNS TB	44	7	15.9 %	Epilepsy	12	1	8.3 %
Multi-resistant drug TB	2	1	50.0 %	Febrile convulsions	16	0	0.0 %
				Developmental disability	7	0	0.0 %
		% of patients admitted					
Patients with hospital acquired infection		0					
Patients with IV complications	3	.2					



# Summary (Automated) Data Reporting – SCN

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Search from 1/1/2021 Search Search to 31/12/2021

## Neonatal Summary

	Admissions	Total Deaths	Case Fatality Rate		Admissions	Total Deaths	Case Fatality Rate
<b>Neonatal</b>	1651	113	6.8 %	<b>Number of HIV exposed patients</b>	51		
Prematurity	198	0	28.8 %	<b>Congenital infections</b>			
Neonatal sepsis	1294	59	4.6 %	Congenital rubella syndrome	0	0	? %
Birth asphyxia	378	53	14.0 %	Congenital syphilis	13	0	0.0 %
Respiratory distress syndrome (RDS)	19	14	73.7 %	Congenital malaria	0	0	? %
COVID 19 acute respiratory infection	5	2	40 %				
<b>Low birth weight</b>	1626	112	6.9 %	<b>Congenital malformations</b>	35	11	31.4 %
1500g - 2500 grams	340	30	8.8 %	Congenital heart disease	0	3	37.5 %
1000g - 1499 grams	51	26	51.0 %	Microcephaly	5	2	40.0 %
<1000 grams	24	17	70.8 %	Congenital gastrointestinal anomalies	10	1	10.0 %
Born before arrival / Home birth	142	8.6 %		Congenital genito-urinary malformation	1	0	0.0 %
				Congenital limb abnormalities	5	3	60.0 %
<b>Fully breast fed at discharge</b>	1417	? %					
<b>Neonatal vaccines given</b>							
Hepatitis B vaccine given	830	? %					
BCG vaccine given	924	? %					
<b>Patient with hospital acquired infection</b>	2	.1					
<b>Patients with IV complications</b>	4	.2					

# Manual Paediatric Summary Form

## Paediatric Summary

Search from

Search

Search to



	Admissions	Total Deaths	Case Fatality Rate
<b>Total</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Pneumonia</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Severe pneumonia	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Bronchiolitis	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Asthma	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Diarrhoea (all cases)</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Dysentery	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Cholera	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Typhoid	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Malaria</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Anaemia</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Iron deficiency	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Meningitis / Encephalitis (all cases)</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<i>S. pneumoniae meningitis</i>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<i>H influenzae meningitis</i>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<i>Neisseria meningitidis</i>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<i>Cryptococcal meningitis</i>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Japanese encephalitis	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Encephalitis other	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Severe sepsis / septic shock</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Dengue fever</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>COVID 19</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Tuberculosis</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Pulmonary TB	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Extra pulmonary TB	<input type="text"/>	<input type="text"/>	<input type="text"/> %
CNS TB	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Multi-resistant drug TB	<input type="text"/>	<input type="text"/>	<input type="text"/> %
		% of patients admitted	
Patients with hospital acquired infection	<input type="text"/>	<input type="text"/>	
Patients with IV complications	<input type="text"/>	<input type="text"/>	

	Admissions	Total Deaths	Case Fatality Rate
<b>HIV</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Number of HIV exposed patients	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Proportion of HIV patients on ART	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Proportion of HIV patients on Cotrimoxazole	<input type="text"/>	<input type="text"/>	<input type="text"/> %
	Patients	% Paediatric HIV patients	
	<input type="text"/>	<input type="text"/>	<input type="text"/> %
	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Malnutrition</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Severe malnutrition	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Moderate malnutrition	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Vitamin A deficiency	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Vaccine preventable disease</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Measles	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Rubella	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Whooping cough	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Tetanus	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Acute Flaccid Paralysis	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Pigbel	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Fully immunised	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Partially immunised	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Unvaccinated	<input type="text"/>	<input type="text"/>	<input type="text"/> %
		% Fully immunised	
		% Part immunised	
		% Unvaccinated	
<b>Child protection</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Trauma</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Cancer</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Rheumatic fever / Rheumatic heart disease</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Congenital heart disease</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Endocrine problems</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
<b>Neurology and development</b>	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Epilepsy	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Febrile convulsions	<input type="text"/>	<input type="text"/>	<input type="text"/> %
Developmental disability	<input type="text"/>	<input type="text"/>	<input type="text"/> %



# Manual Reporting – Paeds Ward

## Paediatric Hospital Reporting V12.2 Summary Sheet

Week from: 28/10/2020

Search for: 2/1/09/2021

		Total Admissions	Total Deaths	Case Fatality Rate
	Patients	2875	63	2.19
Respiratory	Pneumonia	843	0	0
	Severe pneumonia	413	13	3.11
	Bronchiolitis	83	0	0
	Asthma	10	0	0
			207	1
Diarrhoea	Diarrhoea (all cases)	80	0	0
	Dysentery	0	0	0
	Cholera	301	1	0.33
	Typhoid	4	0	0
Malaria	Malaria	26	0	0
Anaemia	Anaemia	0	0	0
	Iron deficiency	91	13	14.29
Meningitis	Meningitis (all cases)	2	+	-
	<i>S. pneumoniae</i> meningitis	+	+	-
	<i>H. influenzae</i> meningitis	+	+	-
	<i>Neisseria meningitidis</i>	+	+	-
	<i>Cryptococcal meningitis</i>	+	+	-
	Japanese encephalitis	+	+	-
	Virid encephalitis other	4	+	+
Neurology and development	Epilepsy	17	0	0
	Febrie convulsions	47	0	0
	Developmental disability	8	0	0
Sepsis	Severe sepsis / septic shock	225	4	1.78
COVID 19	Acute respiratory illness or COVID 19 with fever	3	1	33.33
Dengue	Dengue (all types)	0	0	0
Tuberculosis	Tuberculosis	87	5	5.75
	Pulmonary TB	40	0	0
	Extra pulmonary TB	30	0	0
	CNS TB	17	5	29.41
	Multi-drug resistant drug TB	0	0	0
	Number of HIV patients	33	11	33.33
	Number of HIV exposed patients	33	11	33.33



# Manual Reporting - SCN

## Neonatal Hospital Reporting V12.2 Summary Sheet

Search from 26/10/2020 Search to 27/9/2021

	Admissions	Total Deaths	Case Fatality Rate
Neonatal	1409	92	6.53 %
Neonatal sepsis	660	21	3.18 %
Birth asphyxia	340	23	6.75 %
Prematurity	174	33	18.97 %
Respiratory distress syndrome (RDS)	64	16	25.0 %
COVID 19 (acute respiratory illness)	21	1	4.76 %
Low birth weight			
1500g - 2500 grams (LBW)	285	21	7.37 %
1000g - 1499 grams (VLBW)	47	7	14.89 %
<1000 grams (ELBW)	13	5	38.46 %
Born before arrival / Home birth	105	7.45 %	
	Admissions	% Admissions	
Fully breast fed at discharge	1314	93.26 %	



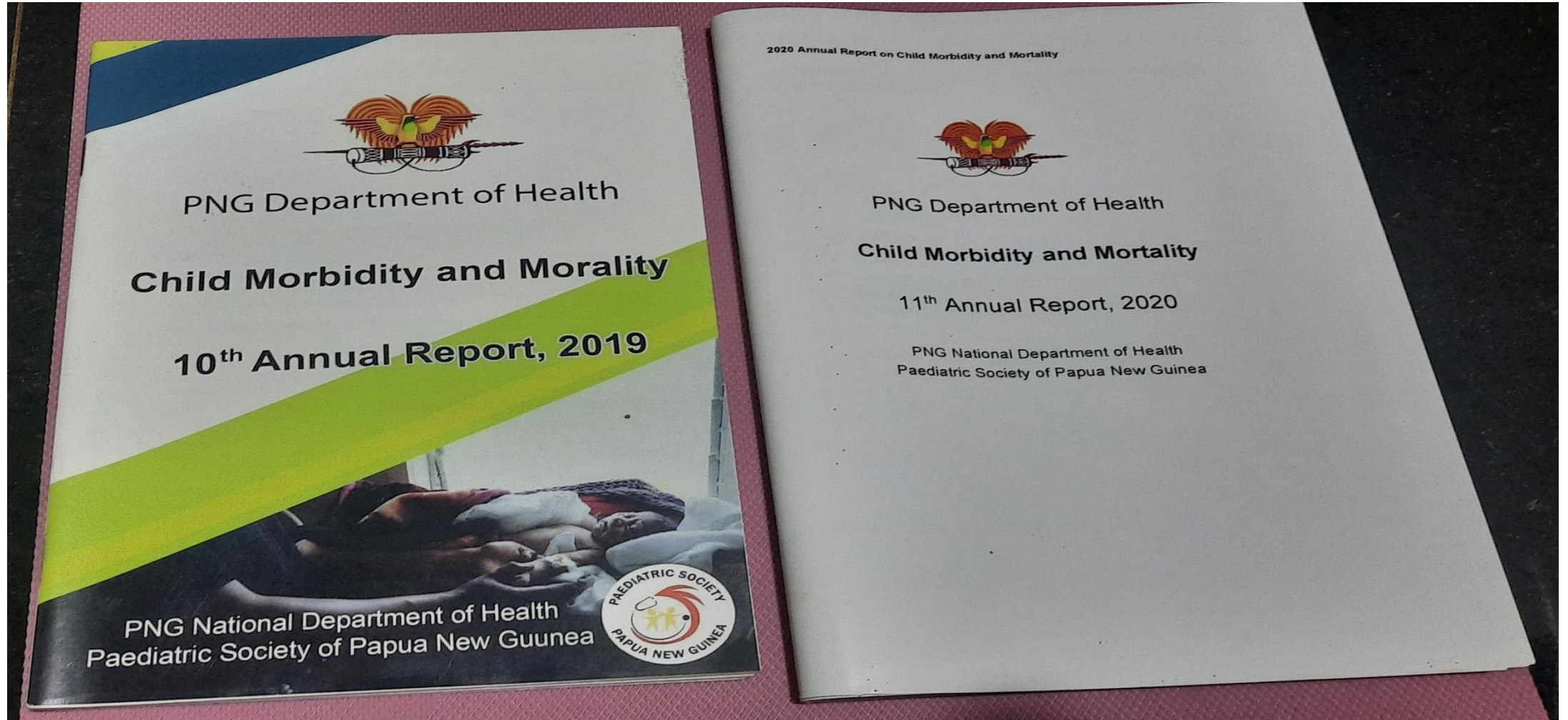
# Data

## Data from Hospitals are:

1. Collected – Combined - Analysed
2. Annual reports of **Child Morbidity** and **Mortality** are published  
(**2010-2021**)
3. Considered by the Child Health Advisory Committee
4. Lessons learned - Considered in terms of Policy and Practice



# Annual Morbidity & Mortality Report



## Soft ware Program – Latest Revised Version (12.2)

The Soft ware Program has been revised in recent years to include:

1. Chronic illnesses in children
2. Congenital anomalies
3. Emerging diseases including COVID-19
4. *Maternal component* is also included in the latest version (v12.2) of the PHR to include:
  - *Maternal health outcomes* and *complications*

## Attraction of Program By Others

1. Prof Glen Mola and (O & G) team are in support to role out this program in their wards to monitor their level of care
2. Slowly getting interested by all including our neighbouring countries:
  - Solomon Islands
  - Fiji
  - Vanuatu



