

PSRH 12<sup>th</sup>  
Biennial  
scientific  
conference-20  
17.

---

BBA Study

Midwife Aliote Galuvakadua

# Research Title

---

- A Retrospective Study on Women Who Birthed their Babies Before Arrival (BBA) to CWMH maternity unit from Jan to Dec 2013.

# Introduction/Background

---

- Definition BBA- woman who birthed their baby before arrival to hospital.
- BBA's contributes to a special group that is at risk to high morbidity and mortality.
- These women can stay longer in the hospital.
- No study done in Fiji.

# Study Setting

---

- CWMH maternity unit-Anderson maternity.
- Largest maternity unit in Fiji.
- Bed state of 169.
- Annual birth average 8000 (CWMH).
- Approximately 40% of Fiji annual births.



# Research Team

---

- Primary Investigator

Aliote Galuvakadua- Midwife: Maternity Unit, Colonial War Memorial Hospital

- Mentor

Sharon Biribo- Acting Director Research College of Medicine Nursing & Health Sciences: Fiji National University

- Advisor

James Fong- HOD O&G CWMH.

# Literature Review

---

- Improving the health of women and children during child birth is an international priority.
- WHO estimated -1,500 women dies per day resulted from complication of child birth and 536,000 maternal deaths yearly.
- BBA's incidence varies 0.1 – 0.3% in developed countries and rises to > 50% in lesser developed countries.

# 7 Literature Review

---

- Kumbani, Byani, Chirwa and Odland-qualitative study in rural Southern Malawi ,2013.
- Women’s perspective on perinatal care-titled why women fail to give birth in health facilities.?
- Result- onset of labour at night, rainy season, rapid labour, socio cultural factors and health worker’s attitude.

# 8 Literature Review

---

- Eakabua, Odusolo, Agan, Ikalaki, Etokidan –study in South Eastern ,Nigeria,2011.
- Focus- awareness of BPP/CRP and assess the use of maternity services, a multi centric study looking at 800 women.
- Result- prevailing illiteracy, insufficient infrastructure, poor transport system and unpredicted assess to health care providers.
- BPP/CRP-promotes skilled care for all births and encourages decision making before the onset of labour.



# Research Question

What are the factors influencing women to birth their babies before arriving to CWMH?

---

## Aim

Investigate factors influencing women to birth their babies before arriving to CWMH.

## Objectives

- Describe the socio demographic characteristics of women who birth their babies before arrival
- Describe maternal and foetal outcomes
- Audit documented interview conducted post BBA for reasons for BBA

# BBA Annual Report Summary

A retrospective record review BBA's CWMH 2013. 12 months period Jan- Dec.

---

Year	Total Birth	BBA
2011	7920	63
2012	8207	68
2013	8717	62
Total	24844	193

# 11 Methodology: Process for data collection

## Research Approvals

- Facility approval (HOD, MNS, MS of CWM Hospital)
- National Health Research Committee (NHRC)
- Fiji National Health Research Ethics Review Committee (FNRERC)

## Securing Funds

- Request sent to NHRC (through MOH Research Secretariat)
- Request sent to PSRH

## Case Identification

- Identification of BBA cases from Maternity Unit Register
- Note National Health Number (NHN) to identify folders

## Data Collection

- Registry Staff assisted with folder retrieval
- PI: Commenced data collection of BBA study variables according to Standard Data Collection Sheet
- Patient Confidentiality maintained using a Data De-identification/ Coding form

# Data de-identification Form

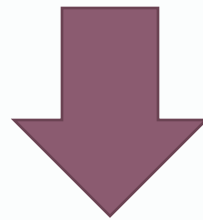
Study number	NHN	Participant name	participants fathers name
BBA 1			
BBA 2			
BBA 3			



# Data-2013

---

I-taukei	Fijians of Indian descent	Fijian of Other Origin
57	4	1
Total = 62		



- 49 Folders retrieved
- Folder retrieval rate = 79%

# Analyses

---

- Descriptive study
- Results represented as Counts, Frequencies and Percentages
- Folder retrieval rate < 80%, therefore unable to make generalizable conclusions

# Results

## Socio-demographic characteristics of women who Birthed Before Arrival

Table of Age Groups vs. Ethnicity of mothers who BBA

		Ethnicity of Mothers		
		I-Taukei N (%)	Fijian of Indian Descent N (%)	Row Total N (%)
Age Groups	15-19 Yrs	4 (8.5)	2 (4.3)	6 (12.8)
	20-24 Yrs	14 (29.8)	0	14 (29.8)
	25-29 Yrs	12 (25.5)	1 (2.1)	13 (27.7)
	30-34 Yrs	9 (19.1)	0	9 (19.1)
	35-40 Yrs	4 (8.51)	1 (2.1)	5 (10.6)
Column Totals		43 (91.5)	4 (8.5)	47 (100)

# 16 Results

## Socio-demographic characteristics of women who Birthed Before Arrival

Table of Age Groups vs. Marital Status of mothers who BBA

		Marital Status of Mothers				Row Totals N (%)
		Not Indicated N (%)	Married N (%)	Single N (%)	Divorced N (%)	
Age Groups	15-19 Yrs	0	2 (4.3)	2 (4.3)	2 (4.3)	6 (12.8)
	20-24 Yrs	0	6 (12.8)	5 (10.6)	3 (6.4)	14 (29.8)
	25-29 Yrs	1 (2.1)	8 (17)	2 (4.3)	2 (4.3)	13 (27.7)
	30-34 Yrs	0	8 (17)	1 (2.1)	0	9 (19.1)
	35-40 Yrs	0	3 (6.4)	2 (4.3)	0	5 (10.6)
Column Totals		1 (2.1)	27 (57.4)	12 (25.5)	7 (14.9)	47 (100)



# 17 Results

## Socio-demographic characteristics of women who Birthed Before Arrival

Table of Age Groups vs. Level of education of mothers who BBA

		Level of Education				Row Totals N (%)
		Not Indicated N (%)	Primary N (%)	Secondary N (%)	Tertiary N (%)	
Age Groups	15-19 Yrs	0	0	6 (12.8)	0	<b>6 (12.8)</b>
	20-24 Yrs	1 (2.1)	1 (2.1)	8 (17)	4 (8.5)	<b>14 (29.8)</b>
	25-29 Yrs	0	2 (4.3)	6 (12.8)	5 (10.6)	<b>13 (27.7)</b>
	30-34 Yrs	1 (2.1)	1 (2.1)	3 (6.4)	4 (8.5)	<b>9 (19.1)</b>
	35-40 Yrs	0	1 (2.1)	4 (8.5)	0	<b>5 (10.6)</b>
<b>Column Totals</b>		<b>2 (4.3)</b>	<b>5 (10.6)</b>	<b>27 (57.4)</b>	<b>13 (27.7)</b>	<b>47 (100)</b>

# Results

## Socio-demographic characteristics of women who Birthed Before Arrival

Table of Age Groups vs. Employment Status of mothers who BBA

		Employment Status			Row Totals N (%)
		Not Stated N (%)	Employed N (%)	Not Employed N (%)	
AgeGroups	15-19 Yrs	1(2.1)	1(2.1)	4 (8.5)	<b>6 (12.8)</b>
	20-24 Yrs	1 (2.1)	2 (4.3)	11 (23.4)	<b>14 (29.8)</b>
	25-29 Yrs	1 (2.1)	2 (4.3)	10 (21.3)	<b>13 (27.7)</b>
	30-34 Yrs	0	4 (8.5)	5 (10.6)	<b>9 (19.1)</b>
	35-40 Yrs	0	1 (2.1)	4 (8.5)	<b>5(10.6)</b>
<b>Column Totals</b>		<b>3 (6.4)</b>	<b>10 (21.3)</b>	<b>34 (72.3)</b>	<b>47 (100)</b>

# 19 Results

## Socio-demographic characteristics of women who Birthed Before Arrival

Table of Age Groups vs. ANC Booking Status of mothers who BBA

		ANC Booking Status		Total N (%)
		Booked N (%)	Unbooked N (%)	
AgeGroups	15-19 Yrs	4 (8.5)	2 (4.3)	<b>6 (12.8)</b>
	20-24 Yrs	12 (25.5)	2 (4.3)	<b>14 (29.8)</b>
	25-29 Yrs	10 (21.3)	3 (6.4)	<b>13 (27.7)</b>
	30-34 Yrs	8 (17)	1 (2.1)	<b>9 (19.1)</b>
	35-40 Yrs	3 (6.4)	2 (4.3)	<b>5 (10.6)</b>
<b>Column Totals N (%)</b>		<b>37 (78.8)</b>	<b>10 (21.3)</b>	<b>47 (100)</b>

# 20 Results

## Socio-demographic characteristics of women who Birthed Before Arrival

Table of Age Groups vs. Parity of mothers who BBA

		Mother's Parity			Row Total N (%)
		1-3 N (%)	4-6 N (%)	7-9 N (%)	
<b>Age Groups</b>	15-19 Yrs	5 (11.1)	0	0	5 (11.1)
	20-24 Yrs	13 (28.9)	0	0	13 (28.9)
	25-29 Yrs	11 (24.4)	2 (4.4)	0	13 (28.9)
	30-34 Yrs	5 (11.1)	4 (8.9)	0	9 (20)
	35-40 Yrs	2 (4.4)	2 (4.4)	1 (2.2)	5 (11.1)
<b>Column Totals</b>		<b>36 (80)</b>	<b>8 (17.8)</b>	<b>1 (2.2)</b>	45 (100)



# Results

## Maternal & foetal outcomes of women who Birthed Before Arrival in 2013

Table of ANC Booking Status vs. VDRL Status of mothers who BBA

		ANC Booking Status		Row Total N (%)
		Booked N (%)	Unbooked N (%)	
VDRL Status	Non-Reactive	34 (69.4)	3 (6.1)	<b>37 (75.5)</b>
	No Tests Done	0	8 (16.3)	<b>8 (16.3)</b>
	Positive (All Dilutions)	4 (8.2)	0	<b>4 (8.2)</b>
Column Totals N (%)		<b>38 (77.6)</b>	<b>11 (22.4)</b>	<b>49(100)</b>

# Results

## Maternal & foetal outcomes of women who Birthed Before Arrival in 2013

Table of Age Groups vs. Status at discharge of babies who were BBA

		Status at Discharge		Row Totals N (%)
		Alive at Discharge N (%)	Stillbirth N (%)	
AgeGroups	15-19 Yrs	5 (10.6)	1(2.1)	<b>6 (12.8)</b>
	20-24 Yrs	14 (29.8)	0	<b>14 (29.8)</b>
	25-29 Yrs	12 (25.5)	1(2.1)	<b>13 (27.7)</b>
	30-34 Yrs	9 (19.1)	0	<b>9 (19.1)</b>
	35-40 Yrs	4 (8.5)	1(2.1)	<b>5 (10.6)</b>
<b>Column Totals N (%)</b>		<b>44 (93.6)</b>	<b>3 (6.7)</b>	<b>47 (100)</b>

# Results

## Maternal & foetal outcomes of women who Birthed Before Arrival in 2013

Table of Age Groups vs. Status at discharge of babies who were BBA

		Baby's Gender		Row Total N (%)
		Male N (%)	Female N (%)	
Gestational Age	Unknown	1 (2.0)	0	<b>1 (2.0)</b>
	Term	18 (36.7)	24 (49)	<b>42 (85.7)</b>
	Preterm	2 (4.4)	4 (8.2)	<b>6 (12.2)</b>
Column Total N (%)		<b>21 (42.9)</b>	<b>28 (57.1)</b>	<b>49 (100)</b>

# 24 Results

## Maternal & foetal outcomes of women who Birthed Before Arrival in 2013

Table of Age Groups vs. Outcome of babies who were BBA

		Outcomes				Row Total N (%)
		Not Recorded N (%)	Discharge to Mother N (%)	Admitted to Nursery N (%)	Complications N (%)	
Age Groups (Years)	15-19	1 (2.1)	5 (10.6)	0	0	<b>6 (12.8)</b>
	20-24	0	13 (27.7)	1 (2.1)	0	<b>14 (29.8)</b>
	25-29	1 (2.1)	12 (25.5)	0	0	<b>13 (27.7)</b>
	30-34	0	8 (17)	1 (2.1)	0	<b>9 (19.1)</b>
	35-40	0	4 (8.5)	0	1 (2.1)	<b>5 (10.6)</b>
Column Total N (%)		<b>2 (4.3)</b>	<b>42 (89.4)</b>	<b>2 (4.3)</b>	<b>1 (2.1)</b>	<b>47 (100)</b>



# Results

## Reasons why women Birthed Before Arrival in 2013

Table of Ethnicity vs. whether Birth Preparedness Plan & Complication Readiness Plan had been done

		BPP CRP Done			Total N (%)
		Not recorded N (%)	Yes N (%)	No N (%)	
<b>Ethnicity of mothers</b>	I-Taukei	10 (20.4)	8 (16.3)	25 (51)	<b>43 (87.8)</b>
	Fijian of Indian Descent	0	1 (2)	5 (10.2)	<b>6 (12.2)</b>
<b>Column Total N(%)</b>		<b>10 (20.4)</b>	<b>9 (18.4)</b>	<b>30 (61.2)</b>	<b>49 (100)</b>

# Results

## Reasons why women Birthed Before Arrival in 2013

Reasons for Birthing Before Arrival	Frequency	%
None Documented,	41	84.0
Health Centre Referral	2	4.0
Counseled by Empower Pacific	1	2.0
Did not think she was pregnant.	1	2.0
Mentally Challenged	1	2.0
Intended to go for booking	1	2.0
Referred to social welfare	1	2.0
Unemployed, single, 2 eldest children given up for adoption	1	2.0
<b>Total</b>	<b>49</b>	<b>100.0</b>

# 27 Conclusion: Socio-demographic characteristics of women who birthed before arrival in 2013

---

- Almost **70%** of women belonged to the age range of 20-29 years
- 91.5% of women were I-Taukei
- Almost **60%** of women were married
- **57.4%** of women received primary level of education and a further **27.7%** had tertiary level education
- 72.3% of women were not employed
- **80%** of women who birthed before arrival had parity of 1-3. Of these, **19.1%** had parity of 1. **17.8%** had parity between 4-6
- **78.8%** of mothers were booked

## Conclusion: Maternal & Foetal outcomes of women who birthed before arrival in 2013

---

- 8.2% of women who tested VDRL Positive were booked mothers
- 93.6 % of babies were alive at discharge
- 89.4% of babies were discharged to their mothers with only 5.4% needing admission to the nursery or having a complication (pre-term)
- Slightly more females were born than males, but the majority, 85.7% were born at term

## Conclusion: Reasons Why women birthed before arrival in 2013

---

- For the 87.8 % of I-Taukei women who BBA, 51% did not have a BPP CRP done
- For the 12.2% Fijians of Indian descent, 10.2% did not have a BPP CRP done
- Overall, documentation for reasons why women birthed before arrival was not recorded: 84%

# Recommendations:

---

- Amend the interview section of the BPP to include specific questions for doctors, nurses and midwives to document specific reasons why the mother birthed before arrival
- Conduct a study interviewing mothers who have Birthed before arrival to understand reasons (some women were multiparous, had tertiary level education, were married and were employed)
- Availability of funds from MOHMS for staff to conduct research: Need to reinstate \$5,000.00 research grants to facilitate research

# 31 Utilization of results

---

- This study is the first in Fiji to document outcomes of mother and babies of BBA's.
- Study will assist healthcare professionals to target awareness among mothers and plan intervention strategies toward preventing BBAs
- Improve the quality of documentation in the interview section
- Develop SOP for BBA's especially documentation: Reasons for BBA, including personal, social, cultural or economic reasons.
- Presentations and publications regarding BBA in the PSRH Journal

## Strengths of the Study:

---

Study was conducted using Observational Routinely-collected health

Data and attempted to adhere to the RECORD guidelines.

## Limitations:

- Lack of funding support from MOHMS research secretariat (delay in implementation)
- Lack of technical support (limited access to workplace computers for data entry etc.)
- Retrieval of patient's record: Missing folders
- BBA interview: Not focused, no structured questions.



# Acknowledgements:

---

- PSRH: Funding the research
- Fiji MOHMS, management and staff of maternity Unit: Colonial War Memorial Hospital, Suva
- Research Unit, Office of the Dean: College of Medicine Nursing & Health Sciences, Fiji National University for conducting Research Capacity Building Workshops in collaboration with Auckland University

(DFAT Strategic Funding 2014)

# References:

---

- 1. United Nations 2000: The Millennium Declarations, Resolutions United Nations New York.
- 2. WHO 2005 Maternal Mortality in 2005, estimates developed by WHO, UNICEF, UNFPA and the World Bank.
- 3. Parag N, Mckerrow NH, Naby F: "Profile of babies born before arrival at hospital in peri-urban setting" the South African Journal of Child Health, South African Medical Association, 11/11/2013.
- 4. Akum F: A Qualitative Study on Factors Contributing to Low Institutional Child Delivery Rates in Northern Ghana: The Case of Bawku Municipality. J Community Med Health Educ-2013.
- 5. Lily Kumbani, Gunnar Bjune, Ellen Chirwa and Jon Odland. Why some women fail to give birth at health facilities: a qualitative study of women's perceptions of perinatal care from rural Southern Malawi, reproductive Health, 2013.
- 6. Ekabua J E, Ekabua K J, Odusolu P, Agan T U, Ikalaki U and Etokiden A J. Awareness of Birth Preparedness and complication Readiness in Southeastern Nigeria. IRSN Obstetrics and Gynecology, Volume 2011.

- 7. McLelland G, Morgan A, McKenna L: Involvement of emergency medical services at unplanned births before arrival to hospital: a structured review School of Nursing and Midwifery, Monash University, PO Box 527, Frankston, Victoria, 16 February, 2013.
- 8. Clinical Network services/ Clinical Practice Guidelines- Maternal Health – Ministry of Health Fiji -2000.
- 9. Colonial War Memorial Hospital- maternity unit annual statistics-2013.
- 10. Presentation – Fiji Maternal Health Service Review. FHSSP 25th November-2013. FHSSP is implemented by Abt JTA, on behalf of the Australian Government.



*Vinaka...!*

