



5th NATIONAL SCIENTIFIC
CONFERENCE ON EPIDEMIOLOGY

Bandung, 19-21 October 2015

Social Determinants of Health

(equity, gender, working with specific populations and
intersectoral action)



FETP

Field Epidemiology Training Program

INDONESIA

ORAL PRESENTATION 9

20 OCTOBER 2015/10.30-11.30

Session 9: MATERNAL, CHILD AND REPRODUCTION HEALTH Ballroom
Edy Marjuang Purba Risk Factors of Low Birth Weight in Gunungkidul District, Yogyakarta Province, 2014
Ira Marti Ayu Effect Timing of First Postnatal Checkup for The Newborn on Neonatal Survival In Indonesia (Analysis on Indonesia Demographic and Health Survey 2002-2003, 2007, and 2012)
Lucky Radita Alma Risk Factors of Preeclampsia/Eclampsia Occurrence in Purworejo, 2014
Ni Wayan Septarini Muntigunung Integrated Maternal and Child Health Intervention (MIMCHI) Result from The Pilot Program

SESSION 9 : BALLROOM

TOPIC: MATERNAL, CHILD AND REPRODUCTION HEALTH

1. Background: One of the main causes of infant mortality is low birth weight (LBW). Based on profile of Yogyakarta provincial health office 2014, Gunungkidul District has the highest infant mortality (196 deaths) and the highest LBW cases (519 cases), making it important to know the causes of LBW. This study explored risk factors of LBW infant cases in Gunungkidul District.

Methods: This was an observational analytic study with unmatched case control design. The total sample was 284 consisting of 142 cases and 142 controls. Cases were live-born infants weighing < 2500 grams and controls ≥ 2500 grams. Samples were taken from five health centers having the highest LBW and controls were taken by systematic random sampling of the same health center. Data were analyzed through chi-square test and multivariate logistic regression.

Results: Bivariate analysis showed that maternal risk factors as age < 20 and > 35 years ($p=0.003$, $OR=2.278$, $95\% CI=1.315-3.946$), low education ($p=0.008$, $OR=1.904$, $95\% CI=1.180-3.073$), anemia ($p=0.001$, $OR=2.392$, $95\% CI=1.438-3.979$), and chronic energy malnutrition ($p=0.000$, $OR=3.047$, $95\% CI=1.763-5.269$) were significantly associated with LBW. Parity and interval of pregnancy were not associated with LBW ($p \geq 0.05$). Result of the multivariate logistic

Background: Mother Morality Rate is one of Millenium Development Goals (MDGs) indicators. Preeclampsia/eclampsia was the second highest mother mortality causal in Purworejo in 2013 (28.57%). This study aims to explore the risk factors related preeclampsia/eclampsia occurrence in Purworejo.

Methods: This cross sectional study used proportional quota sampling. The data collection was conducted in December, 2014-January, 2015 by secondary data using mother card. Chi square test was done.

Results: There were 135 respondents studied. 52.59% was low educated, 28.15% obesity, 13.33% standardize ANC, 11.85% spacing of pregnancy under 2 years and 4.44% oral contraception acceptor. Bivariate analysis of education level showed $p=0.747$ (PR 0.901, 95%CI 0.480-1.694), nutritional status $p=0.003$ (PR 2.552, 95%CI 1.388-5.696), ANC $p= 0.068$ (PR 1.978 95%CI 0.997-3.925), spacing of pregnancy $p= 0.722$ (PR 0.826, 95%CI 0.283-2.415) and contraception history $p= 0.738$ (PR 0.741 95%CI 1.20-4.565).

Conclusions: Nutritonal status is preeclampsia/eclampsia risk factor with risk 2.552 times. Researcher suggest to purworejo health office to increase communication, information and education activity about risk factors of pregnancy complication especially preeclampsia/eclampsia, and establish nutritional consultation to women with obesity to minimalize the risk of preeclampsia/eclampsia.

Key words: Preeclampsia, eclampsia, risk factors, Purworejo

4. **Muntigunung Integrated Maternal and Child Health Intervention (MIMCHI) Result from the Pilot Program**

Ni Wayan Septarini

Muntigunung is a remote village in North-Eastern part of Bali. It is a very dry area with covers 28 km² in altitudes between 200 and 800 meters above sea level. The terrain is rugged and many small canyons make it difficult to cross from one hamlet to the next. Thirteen of the 35 hamlets are not reachable through road.

Result from the baseline health survey on 2009, clearly indicated a need for improved preventative of mother and child health services. This pilot program was a quasi-experimental with no control group design. Two hamlets were selected as the target group of the pilot program which chosen based on access difficulty and the number of mother and child health problems. The activities were antenatal care service, clean and safe delivery, contraceptive service, weight and height measurements for under-fives. This pilot program was conducted for 1 year.

Overall results of the program were 71% of women in reproductive age have used contraceptive. All (8) pregnant women were received ANC at least four times during their pregnancy. Three out of 8 (37.5%) of pregnant women were delivered their babies at health services, (before was 0%) and 20% of under-fives were immunized completely (before was 0%). This program was also reducing the prevalence of under-nutrition in from 41.9%, (March 2014) to 31.3% (January2015). MIMCHI program is one of the effective preventive programs in

order to increase the mother and child health coverage and status, therefore this program could be scale up to other hamlets in Muntigunung. Key Words: Nutrition, under-fives, mother and child health

Oral Presentation 10

20 OCTOBER 2015/11.30-12.30

Session 10: VECTOR BORNE DISEASES AND CHRONIC DISEASES Ballroom
Teguh Tri Kuncoro Source of Transmission of Chikungunya Outbreak in Randusari Village Sub District of Teras District of Boyolali Central Java 2014
Dessy Triany The Picture of Dengue Serology Sentinel Surveillance Evaluation in Indonesia
Desy Ari Apsari Determinants Of Chronic Obstructive Pulmonary Disease In Victims Of The Eruption Of Mount Sinabung Karo District - 2014
Nova Oktavia The Prevalence Study and Risk Factor Of The Metabolic Syndrome in Panjang Beach Village Malabro Bengkulu City 2015

SESSION 10: BALLROOM

TOPIC: VECTOR BORNE DISEASES AND CHRONIC DISEASES

1. Source of Transmission of Chikungunya Outbreak in Randusari Village Sub District of Teras District of Boyolali Central Java 2014

Teguh Tri Kuncoro

Background: Chikungunya fever is an infectious disease caused by chikungunya virus and transmitted by the bite of *Aedes aegypti* or *Aedes albopictus*. Although it is self-limiting diseases, but these diseases often cause outbreaks plaguing the society. The purpose of this investigation is to confirm the diagnosis of outbreaks, obtain the outbreaks based of epidemiological variable and identify the source and mode of transmission.

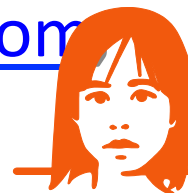
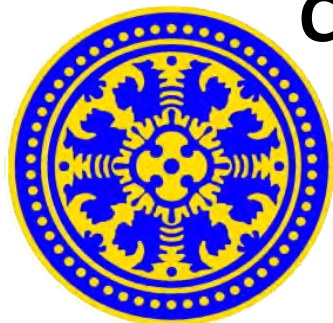
Methods: This research carried out using case-control study design, with Comparing the 1:1. Cases were respondents who experienced a major clinical symptoms of fever, joint pain and rash and accompanied by at least one other symptoms include muscle aches, headache, chills and rashes. While the controls

Muntigunung Integrated Maternal and Child Health Intervention (MIMCHI); Result from the Pilot Program

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MUNTIGUNUNG

- A Village in North-Eastern part of Bali
- +/- 200 Kms from Denpasar
- Very dry area (no rivers and no springs), difficult to access
- 1,154 families representing a total population of 5,319 – organized into 35 groups,
- Known as beggars' village
- Half of the community members stated to be lived in poverty

MUNTIGUNUNG

The challenge

«WATER SCARCITY»

«POVERTY»

«CHILD MORTALITY»

«LACK OF EDUCATION»

Since 2005 → *Future for Children Foundation*

1. Cubang (rain water containers) → water access/availability
2. Community social enterprises (livelihood programs) → to reduce beggars
3. Health → to improve health status

Background

Some results from Basic Health Survey (2009) include:

- More than 35% under-fives were underweight
- Only 54% of children have ever obtained immunization
- 85% of deliveries were unhygienic (home)

Background cont...

- Only one midwife available
- The Pustu (sub public health center) was stop working due to the building is broken down & Puskesmas → 10 KMs
- The transport system at this area is bad, while there is no public transport available

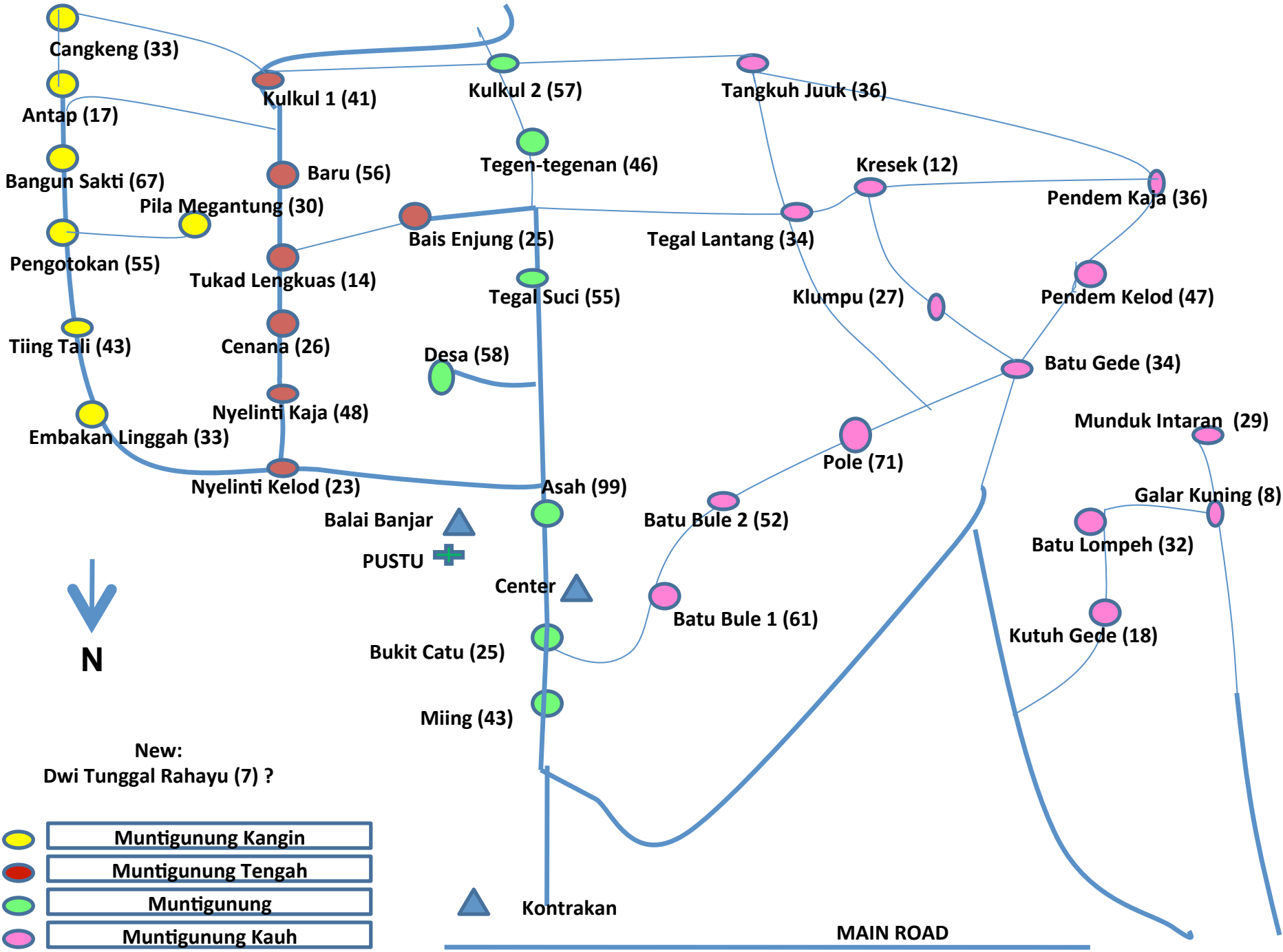
The MIMCHI program

Posyandu revitalization modification

- 1. Nutrition, mother and child health promotion program**
- 2. The supplementation feeding program**
3. The cooking program
4. Healthy home garden
5. Advocacy & coordination

The main activities were antenatal care service, clean and safe delivery, contraceptive service, weight and height measurements for under-fives

→ Quasi experimental with no control group



Cangkeng (33)

Antap (17)

Bangun Sakti (67)

Pengotokan (55)

Tiing Tali (43)

Embakan Linggah (33)

Kulkul 1 (41)

Baru (56)

Pila Megantung (30)

Tukad Lengkuas (14)

Cenana (26)

Nyelinti Kaja (48)

Nyelinti Kelod (23)

Kulkul 2 (57)

Tegen-tegenan (46)

Bais Enjung (25)

Tegal Suci (55)

Desa (58)

Asah (99)

Balai Banjar

PUSTU

Center

Bukit Catu (25)

Miing (43)

Tangkuh Juuk (36)

Kresek (12)

Tegal Lantang (34)

Klumpu (27)

Pole (71)

Batu Bule 2 (52)

Batu Bule 1 (61)

Pendem Kaja (36)

Pendem Kelod (47)

Batu Gede (34)

Munduk Intaran (29)

Galar Kuning (8)

Batu Lompeh (32)

Kutuh Gede (18)

New:

Dwi Tunggal Rahayu (7) ?

- Muntigunung Kangin
- Muntigunung Tengah
- Muntigunung
- Muntigunung Kauh

Kontrakan

MAIN ROAD



Additional Preliminary Data (2013) :

- 61.1% of the women giving birth more than twice (even 33.3% of them have been pregnant and delivery their babies 5 times or more) with 22% of them never been visiting antenatal care during the pregnancy
- 88.9% of the delivery happened at home helped by their husband (83.3%)
- The families gave traditional herbs to the babies' umbilical cords (83.3%)
- Fifty percent (50%) of the mothers feed their babies besides breast milk before the age of 6 months, moreover, 17% of the babies had been fed soon after the delivery.
- Nearly 56% of the under five children never been immunised
- 44.5% of families had lost their infant/babies which none of them known by the head of the village and puskesmas.

GOALS

- 1. To decrease the Infant and Underfive Mortality in Cangkeng and Bangun Sakti**
- 2. To reduce the proportion of under nutrition among under- five children in Cangkeng and Bangun Sakti, Muntigunung Village**

OBJECTIVES

- Increase mothers' the understanding and knowledge about nutrition and the importance of adequate nutrition
- Increase the coverage of delivery help by health professionals
- Increase the knowledge and understanding on cares during pregnancy, delivery and puerperium by antenatal care visit , number of mother who give colostrums, exclusive breastfeeding

THE TARGET GROUPS

- Infant and under five children,
- Pregnant women,
- Mothers of under five children,
- Women in reproductive age and fertile/couple who are still in reproductive age

The Strategies

- 12 times participatory nutrition education workshops during one year period
- Monthly weighting & ANC program in collaboration with primary health centre (puskesmas) As a part of mini posyandu program
- Provide healthy cooking program for target group every two month
- Provide supplementary feeding program
Promote “healthy home garden” in every house”

RESULT

From March 2014 to January 2015

1. Increase in understanding and knowledge

- Pregnancy
- Delivery → clean and safe
- Breast feeding
- After delivery care
- Contraception methods
- Nutrition
- Qualitative study

RESULT cont...

2. Reduce in the prevalence of undernutrition in Cangkeng and Bangun Sakti from 41.9%, (March 2014) to 31.3% (January 2015)

Prevalence of underweight based on weight-for-age z-scores by sex in Cangkeng and Bangun Sakti at the beginning of the program

	All n = 43	Boys n = 25	Girls n = 18
Prevalence of underweight (<-2 z-score)	(18) 41.9 % (28.4 - 56.7 95% C.I.)	(12) 48.0 % (30.0 - 66.5 95% C.I.)	(6) 33.3 % (16.3 - 56.3 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(11) 25.6 % (14.9 - 40.2 95% C.I.)	(7) 28.0 % (14.3 - 47.6 95% C.I.)	(4) 22.2 % (9.0 - 45.2 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(7) 16.3 % (8.1 - 30.0 95% C.I.)	(5) 20.0 % (8.9 - 39.1 95% C.I.)	(2) 11.1 % (3.1 - 32.8 95% C.I.)

Prevalence of underweight based on weight-for-age z-scores by sex sex in Cangkeng and Bangun Sakti at the end of the program

	All n = 48	Boys n = 28	Girls n = 20
Prevalence of underweight (<-2 z-score)	(15) 31.3 % (19.9 - 45.3 95% C.I.)	(10) 35.7 % (20.7 - 54.2 95% C.I.)	(5) 25.0 % (11.2 - 46.9 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(12) 25.0 % (14.9 - 38.8 95% C.I.)	(7) 25.0 % (12.7 - 43.4 95% C.I.)	(5) 25.0 % (11.2 - 46.9 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(3) 6.3 % (2.1 - 16.8 95% C.I.)	(3) 10.7 % (3.7 - 27.2 95% C.I.)	(0) 0.0 % (0.0 - 16.1 95% C.I.)

RESULT cont...

3. Seventy one percent (71%)of women in reproductive age in Cangkeng and Bangun Sakti have use contraceptive method to prevent pregnancy

RESULT cont...

4. All (8) pregnant women were received ANC at least four times during their pregnancy

RESULT cont...

5. Three out of 8 (37.5%) of pregnant women in Cangkeng and Bangun Sakti were delivered their babies at health services
6. None of babies' umbilical cords was treated by traditional herbs
7. All of the babies (8) were exclusively breastfed

RESULT cont...

8. None of pregnant women died during 2014
9. None of underfive children died during 2014

RESULT cont...

10. Twenty percent (20%) of underfive were immunized completely, and all 100% (25 babies that stay in Cangkeng and Bangun Sakti) were received immunization booster

Obstacles and solutions, lesson learnt and best practices:

- Data collection → not completed
- During the first rainy season, most of the people including children did not attend the posyandu/workshop
 - visiting their homes, especially for those in high risk groups such as pregnant women, neonatal (newly born baby), underweight children.
- Sometimes women were difficult to convince their husbands to do what we informed. However, when accidentally some husbands join our session, it seem like they believe and listen to us carefully, and as we follow up we find out that the information that we gave were being implemented.
 - Therefore, for the next program we intend to engage fathers/male in Muntigunung during our information sessions.

Conclusion

- MIMCHI program somehow is effective preventive programs in order to increase the mother and child health status, therefore this program could be scale up to other groups in Muntigunung.

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*Matur Suksma
Terima Kasih
Thank you*



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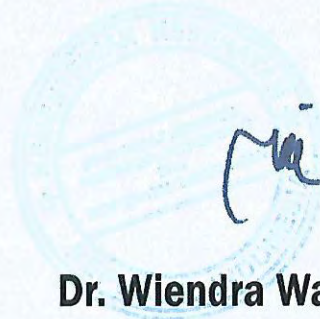
CERTIFICATE OF ORAL PRESENTATION

to

Ni Wayan Septarini

for participating in the
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