

# Based Assistance Continuum of Care Can Increase Family Independence in Overcoming Health Problems Pregnant-Women

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## Abstract

Pregnancy is a natural process during pregnancy does not rule out the possibility of problems or complications that can interfere with health. This study is the development of a minimum standard of visits for pregnant-women and the care provider acts as a ball-picker, with the aim of empowering the family to be independent in recognizing pregnancy complications, overcoming minor complaints, meeting nutritional needs, carrying out pregnancy checks and taking blood tablets. Visits are carried out continuously 15 times during pregnancy and communicating until the mother gives birth. This study used experimental design with control. The research subjects were 120 people taken by simple random sampling. Data were collected using observation sheets, then analyzed using the logarithmic-formula ( $\text{Log}^{10}$ ). The results showed an increase in the level of family independence in recognizing complications during pregnancy, family independence in overcoming mild complaints in pregnancy, independence in fulfilling the nutritional needs of pregnant-women, family independence in carrying out pregnancy examinations, independence the family in giving tablets added blood. The average independence change is 37.4%, based assistance continuum of care that is done by conducting intensive visits and more often can increase family independence in overcoming health problems of pregnant-women, able to reduce self care deficits, improve family capacity in meeting demands self care and families are able provide care for pregnant-women independently.

**Keywords:** *Mentoring, Continuum of Care, Family Independence*

## Introduction

Family approach is a community health centers service that combines individual health efforts and continuous first-level public health efforts based on data and information from family health profiles that focus on promotive and preventive efforts. Based on the Regulation of MoH-RI, four priority areas or targets are established: 1-reduction in maternal and infant mortality (MMR and IMR), 2-decreasing prevalence of stunting, 3-prevention of infectious diseases, 4) prevention of non-communicable diseases.<sup>1</sup>

MMR and IMR is still a top priority. East Java until 2015 was ranked third with the highest MMR reaching 89.6/100,000 live-births.<sup>2</sup> Batu is city with the population

of men is 49.33% and 50.67% of women, the general structure of the population tends to refer to the younger age group, the number of fertile couples 4710 and the number of pregnant-women in one year ranges from 1,300 and is expected to increase 1 percent annually, the total coverage of pregnant-women (K4)=95% (target=100%).<sup>3</sup>

The high maternal mortality rate is made possible by the direct causes of preeclampsia, bleeding, inadequate quality of maternal services, unhealthy conditions of pregnant-women and the determinant factor of 3-Too late in decision making, to health facilities and for help.

The strategy to reduce MMR in the National Medium-Term Health Development Plan 2015-2019 is carried out through the Healthy Paradigm where preventive promotive programs are the main pillar of health by implementing a family-based approach continuum of care since pregnancy. A based approach

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continuum of care is needed, given that during pregnancy 15% of complications cannot be predicted. With a-based approach continuum of care during pregnancy, it will be able to care for pregnant-women, not only in physical condition but also in social-mental conditions but also to care for the social health of pregnant-women. Based mentoring Continuum of care is a strategy developed by The Lancet Neonatal Survival Series. The effect of continuity of care by midwives in pregnant-women was 63.0% more likely to experience spontaneous vaginal birth and 23.1% less experienced episiotomy.<sup>4</sup>

This study aims to develop a minimum standard care program for pregnant-women by providing based mentoring continuum of care, emphasizing strengthening preventive, wellness, providing coaching functions, assisting families in solving problems, with the final results of seeing family independence in 1-recognize pregnancy danger signs, 2-deal with minor complaints during pregnancy, 3-fulfill the nutritional needs of pregnant-women, 4-carry out antenatal care, 5-consume blood-added tablets.

## Methods

This research was an experimental study with control, namely providing assistance to pregnant-women on an ongoing basis using development assistance modules from maternal and child health books, with population of 120 pregnant-women (60=treatment-groups and 60=control-groups), selected by simple

random sampling.

Data were collected by socializing about mentoring first, then implementing mentoring with stages: 1-implementing mentoring by families, 2-researchers and numerators acting as facilitators and making 15 visits to pregnant-women, 3-the companion conduct a study of the characteristics of pregnant-women and pregnancy, 4-observations on the first and second weeks will be observed in 5 aspects of independence, 5-mentoring starts from the third week to the week before delivery, 6-the facilitator will record the results of the mentoring activities and conduct an evaluation of the mentoring results, 7-the researchers actively communicate, and once a month meet for discussion on mentoring, 8-at the end of the week will be observed conservation of the level of family independence.

The stage of data analysis were: calculating the difference between the average value after being reduced before; do equality by taking the logarithmic value calculated using excel with the formula  $\log^{10}$ , then multiplied by 100%, the final multiplication value was used to evaluate effectiveness.

## Findings and Discussion

The results and discussion be elaborated on the data obtained.

**Table 1. Condition of Mothers During Mentoring**

	Intervention			Control	
	Parameter	Amount	Percentage	Amount	Percentage
Increase Body Weight	50-55 kg	32	53.3	23	38.3
	56-60 kg	23	38.3	32	53.3
	61-65 kg	5	8.4	5	8.4
Body-Index	≥20	1	1.7	1	1.7
	21-25	53	88.3	6	10
	26-30	6	10	53	88.3
Systole-Pressure	110	36	60.0	34	56.7
	120	22	36.7	22	36.7
	130	1	1.7	2	3.3
	140	1	1.7	2	3.3
Diastole-Pressure	70	21	35.0	22	36.7
	80	38	63.3	35	58.3
	90	1	1.7	3	5.0

**Cont... Table 1. Condition of Mothers During Mentoring**

	Intervention			Control	
	Parameter	Amount	Percentage	Amount	Percentage
Complaints most	Nausea, vomiting	1	1.7	3	6.6
	Headache	20	33.3	23	38.3
	Pain Waist	19	31.7	21	35
	Whitish	6	10	7	11.7
	Leg Cramps	8	13.3	3	6.6
	Hard Peeing Big	6	10	3	6.6
High Fundus uteri	accordance gestation	60	100	58	96.7
	Not suitable gestational age	0	0	2	3.3
Fetal Heart Rate	<120 x/mnt	0	0	0	0
	120-140 x/min	60	100	60	100
	>140 x/mnt	0	0	0	0

**Table 2. Differences independence of Family to Address Health Issues Pregnancy Before the intervention**

	Intervention					Control				
	Mean	SD	Diff	Log10	100%	Mean	SD	Diff	Log10	100%
Recognizing & overcoming complications	1.74	1.24	0.49	0.24	24	1.61	1.09	0.52	0.21	21
Overcoming minor complaints	3.24	1.74	1.49	0.51	51	3.07	1.49	1.58	0.49	49
Meeting nutritional needs Prenatal	1.74	1.24	0.49	0.24	24	1.54	0.89	0.65	0.187	18.71
Examination	4.24	2.32	1.91	0.63	63	3.94	2.18	1.76	0.59	50
Add blood tablet consumption	1.62	1.35	0.28	0.21	21	1.59	1.3	0.29	0.2	20

**Table 3. Differences independence of Family to Address Health Issues Pregnancy After the intervention**

	Intervention					Control				
	Mean	sd	Diff	Log10	100%	Mean	SD	Diff	Log10	100%
Recognizing & overcoming complications	4.9	0.44	4.46	0.69	69	2.07	1.39	0.68	0.32	32
Overcoming minor complaints	7.5	1.2	6.3	0.87	87	4.3	2.3	1.9	0.6	60
Meeting nutritional needs	4.87	0.5	4.36	0.69	69	2.74	1.67	1.07	0.44	44
Pregnancy checks	7	0	7	0.85	85	5.9	1.88	4.02	0.77	77
Add blood tablet consumption	3.8	0.6	3.2	0.6	60	3.2	1.3	1.9	0.5	50

**Table 4. Differences in Changes in the Level of Independence Before and After Assistance in Intervention and Control Groups**

	Interventions			Control		
	Before	After	Diff	Before	After	Diff
Recognizing & overcoming complications	24	69	45	21	32	11
Addressing minor complaints	51	87	36	49	60	11
Meeting nutritional needs	24	69	45	18.7	44	25.3
Pregnancy checks	63	85	22	50	77	27
Consumption of added blood tablets	21	60	39	20	50	30
Average			37.4			20.86

**Discussion**

**Family Independence in Recognizing Pregnancy Complications**

At the beginning of the measurement provided an opportunity for family non-independence in recognizing pregnancy complications. The family does not recognize when a pregnant woman experiences severe headaches, suddenly bleeds from birth-canal, excessive nausea-vomiting, swollen-hands and face and blurred-vision are complications of pregnancy but it is normal for pregnancy to be given after assistance sustainably the family is more independent in recognizing the complications that might occur during pregnancy. Families know and recognize signs-symptoms such as severe-headaches, sudden-bleeding from the birth-canal, excessive nausea-vomiting, swollen-hands and face and blurred-vision, which are complications in pregnancy.

During the mentoring, there were four pregnant-women who had to be referred to health facilities because 2 people had increased blood-pressure on the second and third visits, 2 people were due to obesity and high-risk pregnancies with Poedji-Rochyati score of 10-18. Escort until the mother gives birth at 2 people’s health facilities in the hospital, 2 people at the health center, with a healthy mother and fetus.

The independence of the family in recognizing complications between those who were given continuous assistance using the mentoring module had a different effect from the control that used maternal and child health books. The level of independence of the assisted families is higher than the control. During mentoring, the companion acts as a driver, motivator and educator. Direct involvement of the family as a companion plays a role in facilitating the family to quickly recognize the complications.

**Family Independence in Overcoming Mild Complaints during Pregnancy**

Family independence in overcoming mild complaints during pregnancy shows different results before and after mentoring. Before being given assistance, both the mentoring and control group had the largest percentage in the independent category. Families do nothing if pregnant-women experience nausea vomiting, complain of vaginal discharge and itching on the birth canal, complain of low back pain, cramps in the legs during sleep at night, and difficulty defecating.

During and after mentoring, families are more independent in dealing with minor complaints that occur during pregnancy, namely nausea, mild-headaches, leg-cramps, difficulty defecating and low-back pain.

When the mother experiences nausea-vomiting, the family gives the mother a warm sweet-drink like sweet-tea and prepares and helps give the biscuits before the mother gets up in the morning. The family does not recommend that pregnant-women not use high-heels sandals or shoes, deliver and accompany mothers to take part in pregnancy exercises to avoid low-back pain. When pregnant-women experience cramps in the legs, the family helps the mother to sit and stand. The family immediately takes the mother to the midwife if the mother experiences leucorrhoea or complaints getting heavier.

### **Family Independence in Fulfilling Nutrition Needs during Pregnancy**

The results showed a change in the level of family independence in meeting nutritional needs during pregnancy. Before being given assistance to both the assisted and control group, the family did not know the food that should be given during pregnancy. The food given and eaten by pregnant-women is the same as other family meals, there is no difference in either portion or frequency. If pregnant-women experience nausea-vomiting, the mother has difficulty defecating the family as a normal thing for pregnant-women, so they have not tried to overcome it through food.

After being given assistance, families are more independent in meeting nutrition during pregnancy. Families in fulfilling nutritional needs prioritize foods that contain protein such as fish, eggs, chicken liver and follow recommendations as stated in the mentoring module that is to meet the nutritional needs of quality pregnant-women fulfilling the elements of nutrition, carbohydrates, proteins, fats, vitamins and minerals. The food consumed during companion for carbohydrates is rice and bread. Proteins: tempeh, tofu, eggs, sea fish, fresh fish, chicken and beef; Fat: from cooking oil, Vitamins: spinach, lettuce, mustard greens, broccoli, carrots, kale, pumpkins and fruits. Mothers also drink an average of 6-7 glasses a day.

### **Family Independence in Conducting Pregnancy Examinations**

Family independence in conducting prenatal-care before and after mentoring in both the mentoring and control group showed the same results. Before family assistance has shown independence in carrying out pregnancy checks, the family knows and understands well when knowing signs of pregnancy immediately

brings the mother to the midwife or community health care. During pregnancy, the family brings pregnant-women to check their pregnancy 9 times, which is 1 time at gestational age 1-3 months, 3 times at gestational age 4-6 months and 5 times at gestational age 7-9 months. The family also immediately checks the pregnancy if there are minor complaints that cannot be overcome by themselves and the signs of childbirth.

### **Family Independence in Consuming Tablets Adding Blood During Pregnancy**

Before being given assistance to the independence of the poor family in helping mothers consume tablets plus blood, this was due to a mother's complaint that after taking tablet medicine the blood of the mother felt nauseous and had difficulty defecating.

During the mentoring, the family as a companion assisted by the accompanying coordinator was educated about the importance of consuming blood-added tablets for pregnant-women contributing to family independence in helping to consume tablets with more blood. The results of observations during mentoring, every day pregnant-women routinely take tablets plus blood one tablet before going to bed using warm-water, this is done to avoid possible side effects that arise, namely headache, nausea and difficulty defecating.

### **The Effectiveness Assistance on of Continuum of Care Family Independence in overcoming the health problems of pregnant-women**

It was found that-based mentoring continuum of care had high effectiveness on family independence in overcoming health problems of pregnant-women. Families given assistance have high independence in overcoming health problems. As long as independent family assistance in recognizing complications, the family is able to overcome minor complaints that occur during pregnancy, the family can independently fulfill the nutritional needs, carry out antenatal-care and independently consume blood-added tablets. Families are able to make decisions when they know that an increase in blood-pressure and an increase in body-weight exceed the normal limit by immediately bringing the mother to the nearest health facility, the community health center.

As long as the health assistance of pregnant-women is well monitored, pregnant-women do not experience health problems resulting in pain, 98% of maternal

blood pressure within the normal range, 98% of maternal nutritional status with a BMI between 23-24, high fundus uterine according to gestational age, 98% of fetal heart-rate within normal limits.

The assistance continuum of care is carried out functions in guiding, sustaining, protecting, supporting and empowering functions, namely functioning to guide the assisted family in the decision-making process, enabling and strengthening the assisted family and coping fully or independently when problems occur health for pregnant-women based assistance Continuum of care carried out in this study is mentoring that refers to quality care by using the principle of family-empowerment that is guided and tracks pregnant-women from time to time during the mentoring period, and optimizes family independence in overcoming health problems for pregnant-women.<sup>1</sup> Family empowerment functions as a link between maternal and child care, and the development of a health system approach to strengthening maternal and child health services.<sup>5</sup> Based mentoring Continuum of care with reference to the quality of care from the results of research effectively increases family involvement as human resources is the potential to empower themselves in achieving independence to solve and overcome health problems for pregnant-women, so as to reduce the incidence of morbidity in pregnant-women, this is appropriate Van den Broek, NR and Graham WJ's opinion that quality care must be at the core of all strategies to accelerate reducing maternal and child mortality.<sup>6</sup>

Mentoring with a-based approach continuum of care during pregnancy, effectively increases family independence in caring for pregnant-women, not only in physical condition but also in social, mental conditions but also caring for the social health of pregnant-women. With based assistance continuum of care, maternal health problems can be overcome, mothers give birth normally, mothers are healthy, babies are also healthy. This is also reinforced by the results of previous studies from McLachlan, HL, Forster, DA and friends, that ongoing care provided by midwives during pregnancy to low-risk women can reduce the rate of Caesarean section.<sup>4</sup> Case management using continuous care or continuum of care for pregnant-women diagnosed with HIV shows lower results for transmission to infants.<sup>6</sup>

### Conclusions

1. Based mentoring continuum of care effectively

increases family independence in recognizing pregnancy complications by 45%.

2. Assistance continuum of care effectively increases family independence in overcoming mild complaints during pregnancy by 36%.

3. The continuum of care is effective in increasing family independence in meeting nutritional needs during pregnancy by 45%.

4. The continuum of care is effective in increasing family independence in carrying out a 22% pregnancy checkup.

5. Mentoring continuum of care effectively increases family independence in giving blood tablets to pregnant-women 39%.

6. Family assistance is Continuum of care effective in increasing family independence in overcoming health problems for pregnant-women.

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**Conflict of Interest-** No

**Ethical Clearance-** Yes

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