

Context, Input, Process, Product Analysis in the Implementation of Iron Supplementation Program in Banyumas, Central Java

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ABSTRACT

Background: Iron supplementation program has been implemented in Banyumas, District, Central Java, but the prevalence of anemia in pregnant women remains as high as 55.37%. The Banyumas District Health Office has launched an ad hoc (temporary) iron supplementation program, namely Hemafort, in order to reduce anemia prevalence. This study aimed to investigate the factors that determine the effectiveness of the iron supplementation program for pregnant women in Banyumas, Central Java.

Subjects and Method: This was a qualitative study with case study approach, and CIPP (context, input, process, product) framework. This study was conducted Wangon II and South Purwokerto Health Centers from October to November 2016. Informants were selected by purposive sampling including midwives, nutritional program managers, pharmacists, head of nutrition section, and pregnant women. The data were collected by in-depth interview, observation, and archival review. The data were analyzed by a multiple case study. The data were validated by data source triangulation.

Results: The iron tablets coverage for pregnant women reached 94.88% and 89.26% in 2014 and 2015, respectively, in Banyumas. The minimal target of iron coverage for pregnant women was 90%. There was no local government policy or standard operating procedure (SOP) that regulated the efforts to tackle anemia problems in pregnant women. The number of health personnel in charge of nutrition and their competence were sufficient. But reliable budget to tackle anemia problem did not exist. Spending district budget was an exit strategy to take when there was deficiency in central budget allocation. The number of iron supplementation tablets was not guaranteed.

Conclusion: The effectiveness of iron supplementation program for pregnant women depends on the existence of relevant policy, SOP, allocation of sufficient and reliable budget, as well as adequate supply of iron tablets.

Keywords: iron supplementation tablets, pregnant women, local government, budget

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BACKGROUND

Anemia is the most common deficiency of nutrients that occurs throughout the world and is one of the most common complication during pregnancy. The prevalence of anemia in pregnant women in around the world according to the World Health Organization (WHO) is 41.8%, partly due to iron (Fe) deficiency (WHO, 2012). Anemia is a common deficiency of nutrients in develo-

ping countries and in low socio-economic groups. The percentage of pregnant women from poor families increases with increasing of gestational age (8% trimester anemia, 12% anemia in the second trimester, and 29% anemia in the third trimester). (Ministry of Health, 2012).

Nationally, the scope of pregnant women received 90 Fe tablets in 2012 at 85%. The data has not reached the 2012 program

target of 90%. Coordination and activities that are integrated with cross-programs still need to be improved so that the coverage can be increased because of the provision of iron supplement is one component of the standard antenatal care. The national coverage target for supplementation of 90 iron supplement in 2014 is 95%, nationally the target has not been fulfilled where national coverage is only 85.1% (Infodatin, 2016). The results of the study of the coverage of Fe 1 and Fe 3 in Banyumas in 2014 were 80.45% and 98% (Banyumas health profile, 2014) while the coverage of Fe 1 and Fe 3 in 2015 were 96.21% and 86.19% (Banyumas District Health Office, 2015).

Efforts to reduce the prevalence of anemia in pregnant women in Indonesia are also carried out through the anemia prevention and management program in collaboration between the Ministry of Health and Mothercare Project and the Office of Health and Nutrition, Bureau for Global Programs, Field Support and Research (Jus'at, 2000). The Ministry of Health has also made regulations on program policies in reducing the prevalence of anemia in pregnant women written in the Regulation of the Minister of Health of the Republic of Indonesia No. 97/2014 concerning health services before pregnancy, pregnancy, delivery and postpartum period, implementation of contraceptive services and sexual health services, attachment 1 part II about Integrated Antenatal Services point 7 that "To prevent iron nutrition deficiency anemia, every pregnant woman must get an iron supplement and Folic Acid at least 90 tablets during pregnancy, given since the first contact".

The iron supplementation program is one of the efforts to reduce the prevalence of anemia in pregnant women in Indonesia. Based on Obai's study (2016), by giving iron supplements and folic acid during pregnan-

cy can reduce the prevalence of anemia in Uganda. Meanwhile, according to Saaka (2012), iron and Zinc supplementation is effective in increasing hemoglobin (Hb) and serum ferritin in pregnant women with iron deficiency in early pregnancy. Developing countries still face critical anemia problems in pregnancy so that the national anemia control policy focuses on iron supplementation (Chatterjee, 2014). The Ministry of Health has also made regulations related to the standard of providing iron supplement through the Regulation of the Minister of Health of the Republic of Indonesia No. 88 of 2014 concerning the standard of providing iron supplement for women of childbearing age and pregnant women.

The iron supplementation program in the Banyumas District Health Office area has been running but the incidence of anemia in pregnant women is still quite high (55.37%). One of the efforts of the Banyumas District Health Office was to hold an iron supplement independently, namely Hemafort, an iron supplement under the trade. The number of complaints from pregnant women about the received iron supplement and coverage of Fe that met the target but anemia was still quite high was the reason why the Banyumas District Health Office procured a iron supplement Hemafort.

Implementation of policies in a program is one stage of the policy process and is also an important stage of an activity that has been planned. Akib (2010), stated that policy of implementation is an activity that can be seen after a legitimate briefing has been issued from a policy that includes efforts to manage inputs to produce output or outcomes for the community. Implementation studies often experience failures, this is because in implementation activities involve many actors that have their own inte-

rests. According to Hogwood and Gunn in a study conducted by Purwanto (2012), the perfect implementation will never be realized, this is due to the constraints of external conditions, time and resources that are not adequately available, policy is not based on a strong foundation of causal relations between the policy and the results to be achieved, the causal relationship between policies and results is rarely direct, implementing agencies are rarely independent and there is no agreement between policy holders and actors about the objectives and ways that will be used to achieve them.

This study applied CIPP evaluation model developed by Stuffle-beam (2003) with a comprehensive framework to direct the evaluation of programs, projects, personnel, products, institutions and systems. The purpose of the CIPP evaluation model was to make decisions in planning, implementing and developing a program. CIPP consisted of Context Evaluation, Input Evaluation, Process Evaluation and Product Evaluation components.

SUBJECTS AND METHOD

1. Study Design

This study used a qualitative method with a case study approach. This study was conducted in Banyumas. The community health center with the highest incidence of anemia was South Purwokerto community health center and community health center with the lowest anemia incidence was Purwokerto 2 Wangon.

2. Study Informants

The determination of informants in interviews was conducted by means of purposive sampling consisting of the main informants as many as 2 people managing nutrition, 2 coordinating midwives, and 2 pharmacists. Supporting informants consisted of 1 Head of Nutrition Section, 1 person in the field of

Pharmacin, and 2 people in the Head of Administration.

3. Analysis Data

Data retrieval was done by analyzing documents, field observations, and interviews. Data collection in this study was started with a study of documents related to the policy of iron supplementation program and then field observations related to the activities of the iron supplementation program and in-depth interviews with the main informants and supporting informants were conducted. In-depth interviews were conducted using interview guides to focus on the questions to be asked. The location of the interviews was carried out in the workspace of each informant to facilitate the affordability of document retrieval and to find a comfortable atmosphere without any pressure from the leadership and to see related information. The validity of the data in this study were obtained by triangulation method and data source triangulation (Sulaeman, 2012).

RESULTS

This study aimed to analyze the iron supplementation program policy in Banyumas. The policy for iron supplementation program was stated in Republic of Indonesia Minister of Health Regulation No. 97 of 2014 concerning health services before pregnancy, pregnancy, delivery and postpartum period, implementation of contraceptive services and sexual health services and Minister of Health Regulation No. 88 of 2014 concerning the standard iron supplement.

The iron supplementation hemaform program was a program from the Banyumas Health Office specifically in the field of nutrition as an effort to reduce the incidence of anemia in pregnant women. Regional regulations regarding the iron supplement hemaform program as supporting regula-

tions from the central policy did not exist in the written form yet.

"So it was not an initiative from the District Health Office, only the District Health Office asked when I became head of the nutrition section, why did pregnant women received a lot but they did not drink it. After I surveyed, they said it felt fishy, nauseated, and so on. Then, there was study about this, then I at the council said that it was bought with people's money, what a waste if it was not consumed, the people ask like this was it allowed to buy with this money, finally the council allowed to buy if there was evidence, like that and finally our goal was to buy it, but it was not written "(Supporting Informant 1)

Health workers in the iron supplementation program were needed according to their respective responsibilities and duties according to their competencies. Health workers involved in implementing the iron supplementation program consisting of nutrition managers, midwives, and pharmacy under the responsibility of the Head of the Community Health Service and overall the program was under the responsibility of the Nutrition Division of the Banyumas District Health Office. The person in charge of implementing the iron supplementation program was a nutrition manager in collaboration with midwives and pharmacy departments. Nutrition managers in accordance with their competence conduct counseling about a balanced nutrition, socialization of iron supplement for pregnant women through integrated antenatal care and counseling at Integrated Services Post. The midwife in charge of conducting checks on pregnant women then distributes iron supplement according to the results of examination by pregnant women while the pharmacy had the task of procuring iron supplement from the community health service to the District Health

Office. The absence of regional regulations about iron supplementation hemafor program had resulted in the absence of a decree for the involvement of health workers.

"All midwives, and I as a nutrition officer, then pharmacy." (Main Informant 1)

"... being responsible for the nutrition program, namely the head of the section in charge of the technical department if at the community health center means the overall head of the health center, health service, and nutrition program ..."

"... and Fe from district medicine warehouses to community health centers through pharmacies and directly forwarded to midwives in target villages " (Supporting informants 1)

The source of funds was an important part so that a program can be implemented. The absence of regional regulations that regulate this program has caused the source of funds for iron supplementation hemafor programs not to be allocated regularly. The 2014 source of funding for the iron supplementation program came from the Regional Government Budget 2 while in 2015 it was sourced from the Pharmaceutical Specific Allocation Fund. The use of these funds has not been able to meet all targets in the Banyumas Regency because the price of iron supplement hemafor is expensive. In 2014 the target met from the fund was 14.41% while in 2015 it was 36.85%. Efforts to fulfill iron supplement hemafor deficiency at the health center community were conducted by purchasing an iron supplement using Regional Public Service Agency (BLUD) funds.

"Yes, the sources of funds are sometimes from the Regional Government Budget, sometimes from the Specific Allocation Fund, which is a minimum of funding for that year." "In 2014 was the Regional Government Budget, in 2015 was from Speci-

fic Allocation Fund, I guess. Right that is a nutrition program, only the price of the hemaform is expensive, we cannot fulfill it yet, maybe 25% or 50%, then the health center community will hold it for the rest "(Supporting Informants 3)

"Hemaform e from the Specific Allocation Fund for non-physical purchases of drugs there is a Specific Allocation Fund for pharmaceuticals and ordinary Fe from dropping centers through provinces"

"There are 30 thousand pregnant women, 30 thousand I have procured 30 thousand times the needs of pregnant women are minimal but I added it, so because the price is expensive it sometimes does not fit, but we keep trying because the community health center is now the Regional Public Service Agency can buy it if the needs are lacking "(Supporting Informant 1)

The effort of the Banyumas District Health Office to reduce the incidence of anemia in pregnant women was by providing an iron supplement hemaform. The specifics of this iron supplement are Ferro Fumarat 300 mg, Manganese Sulphate 0.2 mg, Copper Sulphate 0.2 mg, Vitamin C 100 mg, Folic Acid 2 mg, Vitamin B12 15 mcg. The availability of iron supplement is to achieve program success. In terms of funding, the availability of an iron supplement had not met the needs of all targets in Banyumas Regency. The Banyumas District Health Office sought to meet the lack of iron supplement using Regional Public Service Agency funds.

"The red ones, we receive from the center, that's even more because the pregnant women mostly want to not be too fishy and nauseated, so before the hemaform is like that, they consumed it, but some did not consume it." "Only 30 thousand of our pregnant women, 30 thousand I procure 30 thousand times the needs of pregnant women are minimal but not added to

it, so because the price is expensive so sometimes it doesn't fit, but we keep working because community health centers is now the Regional Public Service Agency can buy itself if the needs are lacking "(Supporting Informant 1).

The iron supplementation Hemaform program is under the bureaucracy of the Banyumas District Health Office and technically carried out by the community health center. The Banyumas District Health Office was as a bureaucracy that had implemented the program did not have technical guidelines and SOP that could be used by all community health centers in Banyumas.

"There is the SOP is in Maternal and Child Health, because I joined the integrated ANC, as a member. Only yesterday was the accreditation, but before we carried out the activity, we did not know it in a written form (Main Informant 1)

"Technical instructions, it's been a long time and it is an actual habit like not needing implementation instructions and technical guidance" (Main Informant 2) (Source: Results of interview, November 2016).

DISCUSSION

Program policy is the beginning of the establishment of a program formulated to design a strategy for achieving program goals and objectives (Purwanto, 2012). Regional regulations on iron supplementation hemaform program policies in Banyumas do not yet exist in written form. This iron supplementation hemaform program is a nutritionist initiative of the Banyumas District Health Office to replace iron supplementation from the Ministry of Health Center with iron supplementation hemaform. There are many complaints of pregnant women who do not take an iron supplement. The coverage of Fe is achieved but the incidence of anemia is still above the national average

is the basis of the Nutrition Field of the Banyumas District Health Office in proposing an iron supplementation hemafor program to the Regional Government of Banyumas. Heriyanto (2013), in his study stated that unwritten policies lead to different interpretations between implementers regarding instructions (goals and objectives) of policy makers. The absence of regional regulations regarding the program for iron supplementation hemafor has caused several stages of program implementation not to work as they should, such as unclear sources of funds, there is no guarantee of the availability of iron supplement hemafor, the absence of technical guidelines and SOPs, and different service processes among community health center.

The manager of nutrition, midwives, and pharmacy is the executive staff for the iron supplementation hemafor program. Each implementing staff has the responsibility and authority to run the program. The program's goal of achieving success is inseparable from the important role of program implementing staff who have qualifications in accordance with their competencies. Good quality of human resources, high motivation, and have responsibility and authority in managing an activity are supporting factors for the success of the program (Grace, 2015). In addition, the goals and objectives, communication, characteristics of the implementing agency, environment, and implementing attitudes are very influential on the success of policy implementation (Heriyanto, 2013).

The funds allocated by the regional government and the District Health Office are insufficient to get an iron supplement hemafor for a number of pregnant women in Banyumas, so that other funds are needed to meet these needs. A study conducted by Rogayah (2015), stated that the exit strategy about funding a program needs to be

planned so that there is no dependence on a single source of funding that can cause the program to stop. The exit strategy for funding the iron supplementation program is the use of Regional Public Service Agency funds to procure additional iron supplement hemafor at the community health center.

The iron supplement standard is regulated in the Republic of Indonesia Minister of Health Regulation No. 88 of 2014 as a reference for the government, provincial governments, district / city governments and all parties related to iron supplement programs for fertile women and pregnant women. The Minister of Health Regulation RI No. 88 of 2014 aimed to ensure the availability of qualified and standardized Minister of Health Regulations in order to prevent and overcome iron nutritional anemia in women of childbearing age with priority in pregnant women. The iron supplement composition for women of childbearing age and pregnant women at least contains iron equivalent to 60 mg of elemental iron in the form of Ferro Sulfate, Ferro Fumara or Ferro Gluconat, there is Folic Acid 0.400 mg. Iron supplementation in Banyumas is hemafor brand with a composition of Ferro Fumara 300 mg, Manganese Sulphate 0.2 mg, Copper Sulphate 0.2 mg, Vitamin c 100 mg, Folic Acid 2 mg, Vitamin B12 15 mcg. Availability of iron supplement hemafor is not guaranteed according to the target number of pregnant women in Banyumas. This is related to the absence of a regional regulation that regulates a fixed source of funds for the provision of iron supplementation. The insecurity of the availability of iron supplement hemafor in Banyumas can be seen from the achievement of the decrease in Fe coverage in 2014 which was 94.88% decreased in 2015 by 86.26%.

A bureaucracy needs tools as a means to run programs in the form of policies, regulations, technical instructions and SOPs to convert inputs into outputs (Sulaeman, 2014). Banyumas District Health Office is a government agency that implements a iron supplementation hemafor program for pregnant women. Technically the implementation of an additional iron supplementation program was carried out by the community health center as a government-owned health service. The implementation of the iron supplementation program can work with technical instructions and SOPs. Banyumas District Health Office does not yet have technical instructions or SOPs on iron supplementation hemafor so that it affects the iron supplementation service processes such as iron supplement hemafor from the Banyumas District Health Office in South Purwokerto Public Health Center only in pregnant women with anemia while in 2 Wangon community health center, all pregnant women get iron supplement, Communication, Information and Education (IEC), and a compliance monitoring system that is not uniform among community health centers. A study conducted by Tuju (2013,) stated that the existence of technical instructions and implementation guidelines assisted in the implementation of the program that is done by implementing staff at the community health center.

The Minimum Service Standard target for Fe coverage is 90%, the achievement of Fe coverage in Banyumas District in 2014 was 94.88% while in 2015 it was 89.26%, a decrease by 5.62%. The input stages in the implementation of the iron supplementation hemafor program include program policies and resources which include health workers, funding, availability of iron supplementation and Standard Operating Procedure (SOP). The policy for iron supple-

mentation hemafor program does not yet exist in written form, the source of funds has not been regulated regularly but the Regional Public Service Agency budget is an exit Strategy for lack of funding. The availability of a iron supplement hemafor is not guaranteed by the District Health Office. The absence of SOPs is an obstacle in the process of iron supplementation hemafor service.

REFERENCE

- Akib H (2010). Implementasi Kebijakan: Apa, Mengapa, dan Bagaimana. *Jurnal Administrasi Publik, I(I) Tn.* 2010. ISSN 2086-6364.
- Banyumas Regency Health Office (2014). *Profil Kesehatan Banyumas tahun 2014.*
- Banyumas Regency Health Office (2015). *Profil Kesehatan Banyumas tahun 2015.*
- Farsi M, Sharif M (2014). Stufflebeam's Cipp & Program Theory: A Systematic Review. *International Journal of Language Learning and Applied Linguistics World (IJLLALW) 6(3): 400-406.*
- Heriyanto S (2013). Analisis Implementasi Kebijakan Pemerintah dalam Penghentian Suplementasi Kapsul Iodium di Kabupaten Magelang. *Jurnal Kesehatan Masyarakat 3(1).*
- Ministry of Health (2012). *Petunjuk Pelaksanaan Surveilans Gizi.* Jakarta. Kemenkes RI.
- Ministry of Health (2014). *Permenkes RI No. 88 Tahun 2014.* Jakarta.
- Ministry of Health (2014). *Permenkes RI No. 97 Tahun 2014.* Jakarta.
- Obai G, Odongo P, Wanyama R (2016). Prevalence of Anaemia and Associated Risk Factors Among Pregnant Women Attending Antenatal Care in Gulu and Hoima Regional Hospitals in Uganda:

- A Cross Sectional Study. *BMC Pregnancy and Childbirth* 16:76 DOI 10.1186/s12884-016-0865-4.
- Purwanto EA, Sulistyastuti DR (2012). Implementasi Kebijakan Publik: Konsep dan Aplikasinya. Yogyakarta. Gava-media.
- Rahmat AA (2015). Policy Implementation: Process and Problems. *International Journal of Social Science and Humanities Research* 3(3): 306-311.
- Rogayah H, Mahendradhata Y, Padmawati RS (2015). Evaluasi Program Terpadu Pengendalian Malaria, Pelayanan Ibu Hamil dan Imunisasi di Kabupaten Hulu Sungai Selatan dan Kota Banjarbaru Provinsi Kalimantan Selatan. *Jurnal Kebijakan Kesehatan Indonesia*, 4(1): 26-31.
- Stufflebeam D (2007). CIPP Evaluation Model Checklist (Second Edition) A Tool for Applying the CIPP Model to Assess Long-Term Enterprise. www.wmich.edu/evalctr/checklistsI.
- Sulaeman ES (2014). Manajemen Pelayanan Kesehatan. Surakarta: UNS Press.
- Sulaeman ES (2015). Metode Penelitian Kualitatif & Campuran dalam Kesehatan Masyarakat. Surakarta: UNS Press.
- Tuju SO, Nugraheni SA, Wulan LRK (2013). Analisis Implementasi Program Pemberian Tablet Fe oleh Bidan di Puskesmas Wilayah Dinas Kesehatan Kabupaten Minahasa Selatan. *Jurnal Manajemen Indonesia* 01(03).
- WHO (2012). Guideline: Daily Iron and Folic Acid Supplementation in Pregnant Women. Geneva.
- WHO (2014). Global Nutrition Targets 2025: Anaemia Policy Brief (WHO/NMH/NHD/14.4). Geneva.