Evaluation Of Integrated Antenatal Care Implementation With Cipp Model In The Work Area

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Abstract.
Antenatal care is health services which is given by professional health workers to increase the health status of pregnant women and their fetus that doing according to the standard of antenatal care which can detect earlier the deviation and the risk which might be occured in pregnancy in order that could be overcomed fast and appropriately. Puskesmas Bagan Batu is not appropriate with standard of antenatal care lack of the knowledge and obedience of midwives, instruments and infrastructure. The purpose of the research was to evaluate the implementation of integrated antenatal care by CIPP model in the work area of Puskesmas Bagan Batu. The research used qualitative method, by in-depth interviews, conducting observation, and document study with 8 informan that consisted of Head of Puskesmas, doctor of program holder KIA, coordinator midwive, 3 midwives in poli KIA, 3rd trimester pregnant women with complete inspection in Puskesmas Bagan Batu, and 3rd trimester pregnant woman with incomplete inspection in Puskesmas Bagan Batu. The result of the research showed that only 2 of the midwives got antenatal care training, instrument and infrastructure can improve more better, midwives had not knowledge and obedience to use the new standard of antenatal care services optimally. So, the process which include the implementation of antenatal care was not according by the standard. The coverage of antenatal care has decreased in the last three years. While coverage of tablet Fe has increased significantly, and the coverage of tetanus toxoid imunization has not increased at all and very far below the standard. It was recommended that public regional of Puskesmas Bagan Batu increase some aspects of input iclude of personal quality, midwives obedience, instrument and infrastructure. And then the aspect of process for the implementation of antenatal care according to the standard to achieve the best result for the quality of antenatal care.

Keywords: 10t evaluation, model CIPP, ANC services standards

I. INTRODUCTION

To decrease mother and baby's mortality rate, WHO develop Four Pillars of Safe Motherhood concept to describe mother and baby's rescue scope (Ngoma et al., 2019; World Health Organization, 2019). The second pilar which is antenatal care defined as planning program consists of observation, education, and medical care for pregnant mother, aiming to maintain mother's health during pregnancy, delivery, and postpartum, also to strive for health baby, safe pregnancy and delivery, evaluate pregnancy risks, plan optimum care in high-risk pregnancy, and decrease mother and fetus' morbidity and mortality (Geltore & Anore, 2021; Miltenburg et al., 2017).WHO estimated 500,000 pregnant mother died due to complications related to pregnancy and delivery worldwide. Data in 2015 showed 216 mothers died every 100,000 live births because of pregnancy and delivery complication (World Health Organization, 2019). In Indonesia, based on Survei Penduduk Antar Sensus (SUPAS) on 2015, maternal mortality rate was 305 per 100,000 live births (Badan Pusat Statistik, 2015). In Riau, 125 mothers died in 2019 and increased to 129 mothers in 2020. Hypertension in pregnancy (pre/eclampsia) is the highest etiology of maternal mortality in Rokan Hilir in 2014, which was 20%, followed by bleeding (40%) and other causes (40%) (Dinas Kesehatan Propinsi Riau, 2020).Previous study reported that mothers with antenatal care less than 4 times had higher risk on neonates' death compared to the ones with antenatal care regularly for 4 or more times (Arunda et al., 2017; Wondemagegn et al., 2018).Educated women tended to start their ANC promptly, such is the case with mothers with previous complications, and previous fertility treatment (Ali et al., 2020).Indicators used to describe antenatal care achievements in pregnant mothers were K1 scope (1st examination) described as 1st

contact of pregnant mother with health workers and K4 scope (4th examination) defined as the 4th or more contact with health workers. SPM target for K1 antenatal care was 100% and K4 was 95%.

Riau had K1 scope 79.7% and K4 70.5% or ranks 14th of the lowest ANC coverage rates (Kementerian Kesehatan, 2018). Routine ANC in Indonesia was regulated in Peraturan Menteri Kesehatan Republik Indonesia Nomor 4 Tahun 2019 stated that every pregnant woman received antenatal care according to standard. When a pregnant mother did antenatal care, health workers gave complete antenatal care according to standard, containing measure weight and height, blood pressure, nutritional status (upper arm circumference), uterine fundal height, fetal presentation and heart rate, Tetanus Toxoid (TT) immunization status screening and, if needed, TT immunization injection, Fe tablet administration, laboratory tests, case management, and interview (Kementerian Kesehatan, 2016).Several previous researches described that 10T care was not done properly due to large number of patients' visits, time and human resources constraints, minimum SOP's insights, and lack of trained health workers (Aisyah et al., 2017; Kabuhung & Basuki, 2012; Kurniasih et al., 2020; Kurniawati et al., 2012). Preliminary study at Bagan Batu primary health center depicted there was a significant decrease of antenatal care visits from 2019 to 2020, under the SPM target which was K1 visit. K1 visit in 2019 was 93.2% or 1,920 pregnant women, while in 2020 only 77.5% or 1,596 pregnant mothers. Meanwhile, K4 visits in 2019 was 86.8% or 1,787 pregnant women down to 74.6% or 1,535 pregnant mothers in 2020. From these data, it can be concluded that K1 and K4 achievements were still far from their targets. Therefore, a review of why the target set has not been achieved is needed. This study aims to evaluate integrated antenatal care (ANC) with CIPP model (context, input, process, product) at Bagan Batu primary health center.

II.   METHODS

This is a qualitative study with in-depth interview, observation, and documents review as means of data collection. This research was done on Bagan Bata primary health center, Bagan Sinembah, Rokan Hilir. Location was chosen based on the consideration that Bagan Batu primary health center was the health care with K1 and K4 scope in antenatal care did not reach national target. The study was conducted from August 2021 – April 2022.Subjects in this study was 8 people: 1 head of primary health center, 1 physician leading the KIA program, 1 coordinator midwife, 3 midwives at KIA policlinic, 1 pregnant mother 3rd trimester with complete antenatal care at Bagan Batu primary health center, and 1 pregnant mother with incomplete antenatal care at Bagan Batu primary health center. Before study, informed consent was given to all subjects in which a consent was given by the subjects after an explanation from the researchers and the subjects signed the consent form. Information was gained from in-depth interview, observation, and document review. Researchers used a semi-structured interview. The interview was done about 45 – 60 minutes.

In this research, observation was performed during ANC. Researchers observed compatibility between care given by midwives to pregnant women with 10T standard. Moreover, during study, we did a review on official documents such as patients' medical records, KIA books, KIA register book, mother's cohort, guidelines and SOPs regarding ANC 10T implementation in Semanu II primary health center. Evaluation in this research applied CIPP model, consisted of evaluation from context, input, process, and product. Data validity was gained through sources and methods triangulation.Data analysis started from data collection, reduction, presentation, and conclusion. Before research, and also as requirements for research, ethical clearance was obtained from Prima Indonesia University Ethical Committee Nomor: 019/KEPK/UNPRI/2022

III.   RESULT AND DISCUSSION

The result is sequentially described and categorized into 4 themes: context, input, process, and product. These themes were then divided into sub themes with data collected. The theme "Context" was divided into background of standard care implementations and ANC 10T care standard policies. The theme "Input" was branched into human resources, facilities and infrastructures, funding sources, and implementation guidelines. The theme "Process" was ANC 10T care standard implementations and barrier

faced. The theme "Product" was detailed as ANC 10T standard of care implementation achievement according to SOP in pregnant women.

3. 1 *Context*

Context of ANC 10T standard of care implementation in this research showed a compatibility between the goal and target of ANC 10T standard of care implementation aiming service of government policies and primary health center's KIA program and the target was pregnant women. Primary health center provides human resources based on its competencies and supporting facilities and infrastructures. On the contrary, a limitation should be evaluated in further implementation which is there are still needs that have not been met from targets.The term needs were also defined as unreached condition of ANC 10T care standards implementation goal which shows Tetanus Toxoid immunization coverage has no increase wherein TT2 in 2021 was only as high as 31.2% while the target was 100%. Conversely, Fe tablet administration was elevated up to 80.5% in 2021 while the target was 100%.

Other objectives such as counselling or KIE was also not effectively done, upper arm circumference measurement was sometimes not performed, and laboratory examination was not completely tested. These limitations caused not optimal antenatal care. Based on this result, subjects stated that antenatal care policies used in primary health center are from Department of Health, Public Health Office, and also primary health center's own policies. According to our observation, primary health center already has guidelines and Standard of Operational Procedure in integrated antenatal care.Good ANC 10T standard of care implementation in Bagan Batu primary health center needed supports from clear policies, goal suitable to policies, clear targets and the targets have been determined in organizing activities, facilities, and infrastructures. Public health care also needs to provide competent human resources in ANC 10T standard of care.

3.2 *Input*

Component of "Input" in ANC in this study consists of human resources, facilities and infrastructures, funding resources, midwife's competency, and midwife's adherence. Based on interview, there are four midwives in KIA clinic which are responsible in several services both inside and outside the primary health center. This is appropriate with primary health center human resources standard policy according to Permenkes Nomor 75 Tahun 2014 for primary health centers in rural areas which stated a minimum of 4 midwives in each primary health centers. The conclusion of subjects' triangulation is the number of midwives in KIA policlinic is sufficient, which consist of 2 PNS and 2 honorary. The coordinating midwife have S1 degree and the other three were D3.In addition to human resources, facilities and infrastructure are very important in the process of providing antenatal care services in a Public health center. The availability of tools for the implementation of the 10T standard of antenatal care at the Bagan Batu Health Center has met the standards in accordance with the SPM, which is based on the Regulation of the Minister of Health of the Republic of Indonesia No. 75 of 2014. Because the availability of facilities and infrastructure in accordance with the standards will be much more supportive in the implementation process so that it will produce services quality and patients will also be more comfortable using existing services.The equipment available in the KIA room of the Bagan Batu Health Center that supports the implementation of the 10T antenatal care service standard includes blood pressure measuring devices/tensimeters with adult cuffs, thermometers, Mid Upper Arm Circumference (MUAC) measuring instruments, Doppler, adult stethoscopes, examination beds, scales, measuring instruments. height, measuring tape, reflex hammer, lamp stand for action, adult thermometer, instrument/tool table, tweezers, speculum, spatula, instrument tub and equipped with 2-dimensional ultrasound.

In addition, it can be seen from the observation that the Bagan Batu Health Center in providing antenatal care services already has a separate room, namely the KIA Room.In general, based on the results of research through observation and indepth interviews, the facilities and infrastructure in the KIA room of the Bagan Batu Health Center are complete and meet the standards. This is also supported by the statement of triangulation informants, namely from pregnant women as service users at the Bagan Batu Health Center who stated that the facilities and infrastructure were considered complete, only that the Ultrasonography (USG) tool was still limited to 2 dimensions, so if you want to see more details, you must be referred to the

hospital.Constraints for infrastructure based on the results of interviews with triangulation informants, namely the Head of Public Health Centers, so far they can still be controlled by means of facilities that are not included in the proposed Activity Implementation Plan. Facilities and infrastructure are a very important things in the process of implementing the 10T antenatal care service standard and cannot be separated from the continuity of a service to be able to produce quality services. This is as stated by previous researchers that shortages of equipment and supplies hinder the provision of full antenatal care services (Libingi et al., 2019).Not only human resources and infrastructure, sources of funds also play a very vital role for the implementation of health services in order to achieve health development goals. Likewise with antenatal services, antenatal services will run well if their implementation is supported by adequate funding. Based on the results of the study, the sources of funds at the Bagan Batu Health Center used to support the implementation of the 10T standard of antenatal care came from two sources, namely BOK and BLUD funds.The Bagan Batu Health Center's BLUD funds come from capitation funds whose funds come from the region or often referred to as APBD and come from the Bagan Batu Public Health Center's revenue fund, namely services for both BPJS patients and general patients. The BLUD funds will be used to support all activities in the building.

In addition to BLUD funds, the Puskesmas also uses the BOK Fund, which is a fund that is directed towards public health efforts. This means that BOK funds are funds used for activities that support the implementation of activities outside the building originating from the central government or APBN.The results of the study show that for the implementation of the 10T standard of antenatal care, so far there are no problems regarding this, because all financing related to existing services is financed by the local government, especially antenatal care services. And for the obstacles so far at the Bagan Batu Health Center there are no obstacles or obstacles related to funding sources that support the implementation of antenatal care services for pregnant women. The results of this study are in line with the theory of previous researchers which stated that the financing for the implementation of health services comes from the APBN and APBD (BOK) (Febriawati & Yandrizal, 2019). This is also in line with the Minister of Health Regulation No. 75 of 2014 which states that funding in Puskesmas comes from the APBD, APBN and other legal and non-binding sources.Another component in the input is the competence of the midwife, in this case related to the knowledge, skills, and performance of service providers. Midwives' knowledge of the minimum standard of ANC services can be identified by mentioning the meaning, benefits, and minimum standards of antenatal care provided.Based on the results of the research by conducting in-depth interviews and reviewing documents, it shows that for the implementation of the 10T ANC standard service at the Bagan Batu Health Center, it is stated that not all informants know the latest minimum ANC service standard, namely 10T.

Of the 4 informants, only 2 informants were able to state the number of standards that must be done correctly. Most were unable to mention measurements of height, upper arm circumference and laboratory examinations as one of the standards and the informants did not know that case management was included in the minimum standard of ANC services. And there is 1 informant who only mentions 5T, very far below the standard that has been set now, which is as much as 10T. This statement is supported by the results of interviews with triangulation informants who stated that the implementation of ANC according to standards was considered very important as a guide for midwives in carrying out examinations given to pregnant women.It can be concluded that the knowledge of midwives on antenatal care service standards is said to be still low. So that it has an impact on the services provided to pregnant women during the visit. The low knowledge of midwives on these standards is due to the lack of socialization to midwives about the latest minimum standards of antenatal care from the leadership of the Health Center or Health Office. Midwives' knowledge of ANC service standards must be increased, considering that there are important actions listed in the latest service standards and must be carried out during examinations that are useful for monitoring the health of pregnant women and their fetuses.This is in line with previous research conducted on eight midwives at the Health Center in Purbalingga Regency which stated that midwives needed to gain knowledge about the latest ANC service standards so that they could adapt to developing science (Ariyanti et al., 2019).Besides the knowledge of midwives, what is no less important is training in antenatal care services. This relates to the abilities and expertise that can be obtained by midwives through the training carried out

and being able to follow the development of science. Based on the results of research through in-depth interviews with 4 midwife informants at the KIA room, it shows that only 2 informants have attended the training but it was carried out a long time ago ±10 years ago. Meanwhile, 2 more informants said they did not know about ANC training and had never been held again by the Health Office.

Knowledge of ANC service procedures was obtained by informants while still in midwifery school. This statement is supported by in-depth interviews with triangulated informants, it is known that the number of midwives in the implementation of ANC is considered sufficient but only 2 midwives have attended the training but it has been a long time since it has been implemented. Meanwhile, the other midwives had never attended training while working at the health center due to the absence of an appeal from the Health Office to attend training. For informants who work for ±5 years at a health center, namely with honorary status, they have never received ANC training on the grounds that they do not know about ANC training. This training is considered important as an effort to provide information on the development of health science, especially ANC services, given the low knowledge of midwives regarding the latest minimum standards of ANC services, as well as increasing the ability of midwives to carry out services that meet standards. Previous research has shown that the entire series of antenatal care activities were carried out according to standards and went well, which included activities for planning care, prenatal care, monitoring the implementation of care, and improving the performance of midwives after participating in the training (Kaparang et al., 2015). The last component in the input is midwife compliance. In conducting ANC examinations, midwives must provide quality services according to standards. Based on the results of the study, it can be seen that almost all informants in providing ANC services have not fully used and utilized service standards to the maximum. The compliance of informants in implementing ANC service standards can be seen when observing informants when performing ANC services.

3.3 *Process*

Based on the results of in-depth interviews with informants that so far the implementation of ANC services at the Bagan Batu Health Center has basically understood and implemented the 10T ANC service standard in every service provided to pregnant women. However, in practice, based on the results of observations, there are still several actions that have not been fulfilled optimally, namely from the results of the study it is known that midwives often forget to take height measurements. Examination of height is also very important to know to estimate the size of the pelvis. Pregnant women who have a narrow pelvis are at risk of not being able to give birth normally, so referrals can be made as early as possible (Kusmiyati & Wahyuningsih, 2019). Meanwhile, for measuring blood pressure for pregnant women, from the results of research through in-depth interviews and observations, it is known that all midwives carry out these actions at every visit. This action must be carried out at every visit because it serves to detect the presence of hypertension in pregnancy and preeclampsia (Astuti et al., 2017). Some midwives also said that they often forget to measure the circumference of the upper arm. Upper arm circumference measurement is carried out at the first contact/first visit to screen pregnant women at risk of chronic energy deficiency (CED) which will have an impact on the fetus (Simbolong et al., 2018). It is different with the measurement of the height of the uterine fundus, almost all midwives carry out the measurement of the height of the uterine fundus at every visit of pregnant women. Measurement of uterine fundal height serves to detect fetal growth whether or not it is appropriate for gestational age which is carried out at 24 weeks of gestation. If the fundal height does not match the gestational age, then there is a possibility of impaired fetal growth (Widyani et al., 2016).

The 10T ANC standard is fetal presentation, from in-depth interviews it was known that all midwives carried out measures to determine fetal presentation in the II and III trimesters of pregnancy. If in the third trimester the lower part of the fetus is not the head, or the head of the fetus has not entered the pelvis, it means that there is an abnormal position due to a narrow pelvis or other problems (Marniyati et al., 2016). Based on the results of the study, it was found that the midwife at the Health Center carried out an examination of the fetal heart rate. Fetal heart rate assessment is done at the end of the first semester and thereafter should be done every antenatal visit. Fetal heart rate that is slower than 120/min or fast than 160/min indicates fetal distress (Kementerian Kesehatan, 2018). All midwives have given blood-added tablets. Giving blood-added tablets aims to prevent iron nutritional anemia in pregnant women, which must

be given at least 90 tablets since the first contact (Sumiaty & Restu, 2016).Based on the results of research conducted through in-depth interviews and observations, it is known that there are some midwives who do not perform screening and immunization of Tetanus Toxoid for pregnant women. The provision of TT immunization is adjusted to the mother's immunization status by screening at the first contact. The implementation of TT immunization is useful for preventing the occurrence of neonatal tetanus which ultimately has an impact on maternal and infant mortality (Yaya et al., 2020).

The further unmet need was laboratory examination in pregnant women. The accuracy to identify the problem started from screening, in consequence, laboratory examination is an integral part of high-quality ANC in identifying a condition that may endangered mothers and their babies (Kurniasih et al., 2020). Previous research demonstrated the importance of laboratory examinations in ANC visits and nothing is missed because it is the initial step in diagnosing any problems in pregnant women (Villadsen et al., 2015). Almost all midwives rarely carry out routine checks such as checking blood type and checking Hb levels. This action is rarely performed by midwives on the grounds that if indicated. Routine laboratory examinations in the form of blood type examinations are carried out once at the first visit to determine the type of mother's blood group in anticipation of an emergency situation. Then the examination of blood hemoglobin levels must be carried out at least once in the first trimester and once in the third trimester which aims to determine whether pregnant women suffer from anemia or not during pregnancy because anemia can affect the process of fetal growth and development (Purnama, 2015).The last standard of the 10T ANC service standard is the interview, the standard for this talk is still not implemented optimally by the midwife. From the observation that the activities carried out by midwives are just ordinary talks without implementing Effective IEC by providing guidance to pregnant women through the materials listed in the integrated antenatal guidelines.

Materials that must be conveyed to pregnant women during the implementation of Effective IEC include: recommendations for antenatal care, clean and healthy living behavior, the importance of husband/family support, introducing danger signs in pregnancy, childbirth and postpartum, balanced nutritional intake, symptoms of infectious diseases, Early Initiation of Breastfeeding and exclusive breastfeeding, postnatal family planning, immunization, classes for pregnant women, and Brain Booster activities (Ruwayda, 2016).The interview is a standard of service for 10T ANC which is no less important than other standards. If a pregnant woman receives a quality ANC, they will have better knowledge and information about the benefits of accessing maternal health care services thereby improving their health status and are more likely to come to a health care center before complications occur (Tafere et al., 2018). The results of the implementation of the 10T ANC service standard at the Bagan Batu Health Center should be implemented optimally because it remembers the importance of standard-compliant services. The importance of standard-compliant services is not an easy thing for health workers, because as health workers require many different actions and skills for routine services (Miltenburg et al., 2017).

3.4 *Product*

The results of the implementation of the 10T ANC service standard, evaluation and monitoring have been carried out by the Bagan Batu Health Center. This activity is carried out every month and every 3 months in an internal mini-workshop to find out the obstacles encountered during its implementation. The evaluation and monitoring carried out by the Bagan Batu Health Center related to the implementation of the 10T ANC service standard is an activity to evaluate and monitor services in the MCH room in general, not specifically only for the implementation of the 10T ANC service standard.A health center should carry out a plan to achieve coverage of antenatal care in mini workshops. In accordance with the Minister of Health Regulation Number 44 of 2016 concerning Health Center Management Guidelines that Puskesmas need to conduct mini workshops to make plans as well as assess how far the Puskesmas has achieved so that it can achieve the predetermined targets and evaluate the obstacles that occur(Maulina et al., 2018). So far, based on the results of interviews, it shows that the evaluation carried out by the Bagan Batu Health Center is more judging from the quantity standard of ANC services, namely looking at the achievements of K1 and K4. For the recording of the implementation of the 10T standard, namely the action, the results will be recorded in the MCH book and MCH register book. All 10T standard components have been written in the MCH book,

even starting from the first page in the MCH book, information for the introduction of the 10T has been provided. Based on the results of the document review conducted by the researcher, the implementation of the 10T ANC service standard has been running but has not been optimal in accordance with the existing SOP.

The Bagan Batu Health Center ANC report from 2019 to 2021 has not reached the target and has continued to decline over the last three years, namely K1 achievement with a figure of 93.2% for 2019, then to 77.5% in 2020 and then decreasing by 69.5 % in 2021 is far from the 100% target. Meanwhile, for K4 achievements with a percentage from 86.8% in 2019 to 74.6% in 2020 and decreasing again to 66% in 2021 from the 95% target.According to PMK Number 43 of 2016 it is clear that the performance achievement of Regency/City Governments in providing health services for pregnant women is assessed from the coverage of Maternal Health Services (K4) according to standards in the regency/city area within a period of one year. And from the results of K4 achievements at the Bagan Batu Health Center, it is still far from the national target of 95%. This happens because sometimes there are pregnant women who prefer to make a follow-up visit and give birth in other facilities.The results of the analysis for product components carried out by researchers on the results of the implementation of the 10T ANC service standard for pregnant women in relation to context, input, process and then to interpret the results to see the effectiveness of its implementation. The effectiveness of the implementation of the 10T ANC service standard at the Bagan Batu Health Center is seen from the functions of planning, organizing, actuacting, controlling, it can be concluded that the assessment of the implementation of the 10T ANC standard as a whole from the product component shows several achievements according to the objectives of the implementation. However, the results are not optimal because there are still some obstacles, starting from context, input and process that affect the results.This is also in accordance with research conducted by Partus Jaya (2018) which states that the evaluation of CIPP is very comprehensive where the information obtained from the components of context, input, process and product becomes the initial stage to evaluate a program so that information about The needs obtained can then be used as a consideration in the priority of service improvement.

IV. CONCLUSION

Evaluation of ANC 10T standard of care implementation in Bagan Batu primary health center using CIPP model evaluation depicted several achievements, however, it was not optimal. This is due to some limitations affecting the result of ANC 10T standard of care implementation and improvements are needed in the future to be able to achieve the optimum result in context, input, process, and product components. Hence, health workers, especially midwives, were expected to do continuous evaluation to ANC 10T standard of care implementation and able to informed pregnant mothers on ANC 10T standard of care.

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