

Utilization of Postnatal Care Services: A Concept Analysis

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Abstract : *Utilization of postnatal care services is one of the very important strategies in the reduction of maternal and neonatal mortality and morbidity. Despite the services being provided at minimal cost, there is still under- utilization of the postnatal care services in Zimbabwe. Maternal and neonatal mortality and morbidity is a burden in Zimbabwe and these issues may be an outcome of under-utilization of postnatal care services that are freely available. The purpose of this analysis was to expand understanding, clarify, develop operational definition and distinguish the concept from ordinary language and personal interest in concept analysis. Walker and Avant model of concept analysis was used in this study. Sixteen articles were systematically reviewed to produce definition of utilization of postnatal care services. Attributes of utilization of postnatal care services are the following: delivery at the hospital, postnatal care within 1 hour after delivery, after 24 hours, day 3 and at 6 weeks. The suggested definition of utilization of postnatal care services can facilitate standardization hence uniform measurement and reporting of utilization of postnatal care services in clinical practice and scientific studies. Multiple measures which capture the different dimensions of utilization need to be considered when reporting a postnatal care service.*

Keywords: *Determinants, Maternal health services, Postnatal care services, Utilization*

1. Introduction.

The first hours, days and weeks after the birth of a child are very critical for the mother and the new born baby. This period is also dangerous because bleeding and infection are causing many maternal deaths, whilst to the new born preterm birth, asphyxia and severe infections pose the highest risk of death.^[3] Each year 3 million infants deaths are recorded in the first week of life and another 900 000 die in the next 3 weeks.^[9] Studies have also shown that 50% of maternal deaths and 40% of neonatal deaths occur within the first 24 hours post- delivery^[3]. If women utilize the available appropriate

postnatal care services especially during the critical period most maternal and neonatal illnesses and deaths could be preventable.^[1]

The term “utilization of postnatal services” is frequently used in health care and in nursing practice. However, this term is not very well defined and perceptions of the meaning of utilization of postnatal care services often vary. Health care workers work to improve utilization of postnatal care services through health education, community participation and increased accessibility of health facilities to pregnant women. Issues of utilization of postnatal care services are a critical issue as this reduces maternal and perinatal mortality. Differences in what is meant by utilization of postnatal care services can lead to different goals, choices and outcomes. The purpose of this concept analysis of utilization of postnatal care services is to bring clarity to the meaning of this term by examining the various ways it is used in health care. Clarifying what is meant by utilization of postnatal care services will help the pregnant mothers and their families to utilize these services. This clarification will be accomplished by looking in literature, the many ways that the term has been described.

From these definitions, the critical attributes of the term will be determined followed by example cases using those attributes. The antecedents and consequences will then be determined followed by an operational definition of the term utilization of post-natal care services that include all the critical attributes. The empirical referents will then be identified and described.

2. Purpose of analysis

The purpose of this analysis is to expand understanding, clarify, develop operational definition and distinguish the concept from ordinary language and personal interest in concept analysis.

3. Specific objectives

- a) To conceptualize the meaning and significance of postnatal care services when delivering nursing care to mothers.

- b) To determine the attributes or characteristics in definitions of utilisation of postnatal care services.
- c) To clarify vague words in relation to utilisation of postnatal care services.
- d) To increase understanding on utilisation and services.

4. Materials and Methods

Walker and Avant (2005) method of concept analysis was used in this analysis. Several articles were reviewed in this analysis but a total of 12 articles were cited. Sample cases were presented to give a clear operational meaning of the concept under analysis. The terms utilization and postnatal care services were defined as found from articles searched on Google Scholar and PubMed.

5. Results

In this analysis 25 articles published on Google search, Google and PubMed were used as literature source. Out of the 12 articles were presented in this analysis. The selected articles were useful in providing a clear operational definition of utilization, postnatal care services and utilization of postnatal care services. The articles considered were published by authorized publishers. The articles also were clear in their definitions and descriptions. The articles that were not considered in this article contained similar views but did not provide a clear operational definition of concept. Published articles by Walker and Avant (2005), Mohan et al (2015), Regassa et al (2011), Khanal et al (2014), Rutaremwa et al (2015), Langlois et al (2013), Tesfahun et al (2014), Yunus et al (2013), Katushabe (2015) and the World Health Organisation (2010).

6. Definitions and use of concept

According to the Medical Dictionary, utilization is the use or amount of usage per unit population of health care or other services, the pattern of use of a service or type of service in a specified time usually expressed in rate per unit of population at risk for a given period. The Medical Dictionary mentions that utilization in health care is the consumption of services or supplies, such as the number of office visits a person makes per year with a health care provider, the number of prescription drugs taken, or the number of days a person is hospitalized.

Thesaurus defines utilization as the act of using. With acronyms including usage, use, utilization exercise and employment. In nursing it can be referred to a service that is practice designed to assess, identify and manage or refer complications for both the mother and baby. Thesaurus define utilization as the condition of being put to use and service as work that is done for others as an occupation or business.

According to the Mosby Dental Dictionary utilization is the extent to which a group uses a particular service in a specified period or the extent to which the members of a covered group uses a program over a stated time.

Utilization of postnatal care services is defined as at least 1 postnatal visit provided to the mother within the first 42 days of birth.^[1] The services are promoting an environment that is conducive for interaction between health care worker and mother without fear and stress, identify potential problems in physical /emotional wellbeing for mother and baby as early as possible. Additionally, ensuring prompt and appropriate help and treatment, enabling the mother to become confident in care of infant and self by providing opportunities for learning and discussion.^[1]

Postnatal period begins immediately after birth and last 6 weeks of which the mother should report to the health facility.^[3] He further mentions that during a postnatal care session, the midwife checks for bleeding and possible risks for infection for example retained products of conception, tears and giving iron supplements to the mother. For the baby, the midwife checks for birth asphyxia, risks for infection for example meconium aspiration syndrome, bleeding from the umbilical cord stump and maturity. It also offers opportunity to promote exclusive breastfeeding, personal hygiene, appropriate feeding practice and immunization. Utilization of postnatal care service is provided from the first hour after birth up to 6 weeks post-delivery^[5].

Postnatal care utilization is defined as a time when the mother and baby reports back for check-up within 6 weeks of delivery.^[11] Postnatal care begins immediately after birth of the baby and extends up to 6 weeks^[9] The postnatal period, defined as the time immediately after the birth of the baby and up to six weeks after birth, is critical for the new born and the mother. For this reason WHO recommends that mothers receive postnatal care within the first 24 hours followed by postnatal check on the second or third day, and then on the seventh day and 6weeks after delivery.^[9]

Utilization of postnatal care services are measures undertaken after birth up to 6 weeks to ensure good health of the mother and the child^[2]. Postnatal care service utilization includes services rendered by the different health institutions to assist mother and baby until 6 weeks of post-delivery^[5].

Postnatal care provides the mother with important information and treatment of complications arising from delivery, provide an opportunity to assess infant, development, new born care including counselling on breastfeeding, prevention of mother to child HIV transmission (PMTCT), immunization and family planning^[7]. Postnatal care services include the prevention of

complications, early detection and treatment and provision of services of breastfeeding, birth spacing, immunization, nutrition, family planning, HIV treatment and management.^[4]

7. Determine the defining attributes

Attributes are defined as characteristics that constantly appear in relation to the central phenomenon even when seen from different perspectives.^[8] The following attributes were identified after analysis of the articles about utilization of postnatal care services and were simultaneously refined and tested by analysis of the case and related concepts presented below.

The defining attributes for utilization include: usage of a health services, specified time, and period. Attributes for postnatal services include: number and timing of postnatal contacts. If birth is in a health facility, mother and new born should receive postnatal care service immediately after delivery and at 24 hours after birth. If birth is at home, the first postnatal contact should be as early as possible within 24 hours of birth. At least three additional postnatal contacts are recommended for mother and new born, on day 3, day 7 and at 6 weeks after birth.^[11]

Immediately after birth up to day 1 all postpartum women should have regular assessment of vaginal bleeding, presence of tears and repair, uterine contraction, fundal height, temperature and pulse routinely during the first 24 hours starting from the first hour after birth. Blood pressure should be measured shortly after birth. If normal, the second blood pressure measurement should be taken within six hours. Urine void should be documented within six hours. Women with 3rd or 4th degree tear or with a baby who died in utero and or mothers with prolonged labor are given prophylactic antibiotics to prevent infection. On the baby the midwife weighs the baby, assesses for signs and risks of infection, bleeding from the umbilical cord stump, assessment of maturity through head to toe physical examination and administering of Niverapine to exposed infants. Babies with meconium aspiration and preterm are given prophylactic antibiotics and first immunization of BCG.

Day 3 and on discharge at each subsequent postnatal contact, enquiries should continue to be made about general well-being and assessments made regarding the following: micturition and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, uterine tenderness and lochia. Breastfeeding progress should be assessed at each postnatal contact. At each postnatal contact, women should be asked about their emotional wellbeing, what family and social support they have and their usual coping strategies for dealing with day-to-day matters.

All women and their families should be encouraged to tell their health care professional about any changes in mood, emotional state and behavior that are outside of the woman's normal pattern. The following signs should be assessed during each postnatal care contact and the new born should be referred for further evaluation if any of the signs is present: stopped feeding well, history of convulsions, fast breathing, severe chest in-drawing, no spontaneous movement, fever, low body temperature, any jaundice in first 24 hours of life, or yellow palms and soles at any age. The family should be encouraged to seek health care early if they identify any of the above danger signs in-between postnatal care visits.

On day 7 after birth, all women should be asked about resolution of mild, transitory postpartum depression also known as maternal blues. If symptoms have not resolved, the woman's psychological well-being should continue to be assessed for postnatal depression, and if symptoms persist, evaluated. Women should be observed for any risks, signs and symptoms of domestic abuse. Women should be told whom to contact for advice and management. All women should be asked about resumption of sexual intercourse and possible dyspareunia as part of an assessment of overall well-being two to six weeks after birth. If there are any issues of concern at any postnatal contact, the woman should be managed and referred according to other specific WHO guidelines.

At 6 weeks growth monitoring, birth spacing, family planning, immunization and general head to toe physical examination are also provided.^[1] Dry blood spot is collected for testing, Niverapine stopped and Cotrimoxazole commenced in HIV exposed infants according to current PMTCT guidelines.

8. Model case

A model case is a real life example of the use of the concept that includes all the critical attributes of the concept.^[8] The following is a model case for the concept of utilization of postnatal care services. Mrs. M, a 30 year old mother of one child who has delivered at a health institution. She had no complications during delivery. Immediately after delivery up to day 1 she had 2 hourly assessment of vaginal bleeding, presence of tears which could be bleeding which was not there. Uterus was palpated to check for contraction which felt like a tennis ball which is a good sign of contraction. Fundal height post-delivery was measured and it was 17 centimeters. Vital Observations were checked 4 hourly and were as follows, temperature ranged between 36 and 37 degrees Celsius, heart rate ranged between 86 and 90 beats per minute and blood pressure, systolic ranged between 110-130 and diastolic between 70-80mmHg during the first 24

hours started from the first hour after birth. Urine void was measured and documented within 6 hours. She had no indication for prophylactic antibiotics.

The midwife weighed the baby within 5 minutes post-delivery and weight was 3200 grams. The baby was also assessed for signs and risks of infection, bleeding from the umbilical cord stump, assessment of maturity through head to toe physical examination. The baby had a head circumference of 34cm and crown to heel length of 49cm. There was no indication for Niverapine and prophylactic antibiotics and first immunization of BCG was administered to the baby on day one.

On day 3 and on discharge, enquiries continued to be made about general well-being and assessments made regarding the following: lochia serosa minimal, passing urine well, no urinary incontinence, had bowel action, no headache, no dizziness, no swollen legs and perineal hygiene adhered to and had no breast pain. Breastfeeding was well established and no mental problems. On discharge, the mother was collected by the husband and in-laws. The women and their families/partners were encouraged to tell their health care professional about any changes in mood, emotional state and behavior that are outside of the woman's normal pattern at home.

At day 3 baby was noted to be breastfeeding well, no history of convulsions, respirations at 60 beats per minute, temperature 36,7 degrees Celsius and no jaundice. The family was encouraged to report to the local clinic early if they identify any danger signs such as poor breastfeeding, twitching and fever.

At day 7 after birth, the woman was assessed for postnatal depression and she had none. The mother was observed for any risks, signs and symptoms of domestic abuse which were not noted. She was asked about resumption of sexual intercourse and possible dyspareunia. There were no issues of concern. Her temperature was 37⁰C, blood pressure 110/75mmHg, and pulse 78 beats per minute. Baby's weight was 3900g, temperature 36, 8⁰C, and pulse 130beats per minute, respirations 50 breaths per minute. On physical examination, head circumference 38cm and crown to heel length 52cm,umbilical stump off and site was clean, no eye discharge, no ear swelling or discharge, all in born reflexes, sucking, swallowing, rooting, morrow, plantar, grasping, extrusion, stepping and walking were present.

At 6 weeks postnatal care visit, the mother's temperature 36⁰C, respiration 42 breaths per minute, heart rate 80 beats per minute and weight 67kgs which was within her usual weight in a non-pregnant state. Routine head to toe physical examination was done and there was no anemia, no breast engorgement, uterus not palpable, no deep vein thrombosis and no edema of lower limbs. Menses had not yet returned and no sexual intercourse yet. Mother was ready for family

planning and was offered Depo Provera and advised on birth spacing. Mother was transferred to general outpatient department in case of problems.

On physical examination, baby's weight 6500g, head circumference 40cm, crown to heel length 56cm. Baby was given second vaccine according to immunization schedule on the child health card which consists of pentavalent 1, oral polio 1,pneumococcal vaccine type 2 and rotavirus vaccine. The baby was referred to the under 5 clinic in case of any problem and for next immunization at 10 weeks of age.

9. Borderline case

Borderline cases contain some of the critical attributes of the concept being examined but not all of them.^[8] The following is an example of a borderline case for the concept of utilization of postnatal care service.

Mrs. N is a mother of 2 who has delivered at a health institution. She had no complications during delivery. Immediately after birth up to day 1, she had 2hourly assessment of vaginal bleeding, presence of tears which could be bleeding which was not there. Uterus was palpated to check for contraction which felt like a tennis ball which is a good sign of contraction. Fundal height post-delivery was measured and it was 16 centimeters. Observations checked 4hourly and were as follows, temperature ranged between 36 and 37,1 degrees Celsius, heart rate ranged between 80 to 90 beats per minute and blood pressure, systolic ranged between 110-130 and diastolic between 60-85mmHg during the first 24 hours started from the first hour after birth. Urine void was documented within six hours. She had no indication for prophylactic antibiotics. On the baby the midwife weighed the baby and was 3100g, assessed for signs and risks of infection, bleeding from the umbilical cord stump, assessment of maturity through head to toe physical examination. The baby had a head circumference of 34cm and crown to heel length of 48cm. There was no indication for Niverapine and prophylactic antibiotics and first immunization of BCG was administered to the baby.

On day 3 and on discharge, enquiries continued to be made about general well-being and assessments made regarding the following: lochia serosa minimal, passing urine well, no urinary incontinence, had bowel action, no headache, no dizziness, no swollen legs and perineal hygiene adhered to and had no breast pain. Breastfeeding was well established and no mental problems. On discharge, the mother was collected by the husband and in-laws. The women and their families or partners were encouraged to tell their health care professional about any changes in mood, emotional state and behavior that are outside of the woman's normal pattern at home.

The following signs were assessed on the baby at day 3 on discharge: breastfeeding well, no history of convulsions, respirations 56 beats per minute, temperature 36 degrees Celsius, no jaundice. The family was encouraged to seek health care early if they identify danger signs such as poor breastfeeding, twitching or develops fever. After discharge on day 3, she never came back for day 7 and day 42 for a postnatal care service. This case represents most of the critical attributes of utilization postnatal care service but not all of them.

10. Related case

Related cases are cases that are related to the concept being studied but that do not contain the critical attributes.^[8] The following is an example of a related case for the concept of utilization of postnatal care service. Mrs. N is a mother of 4 who has delivered at home and reported at the health facility at day 42 for immunization of her baby which is then combined with postnatal care service. At 6 weeks postnatal care visit, the mother's temperature 36.7⁰ C, respiration 18 breaths per minute, heart rate 80 beats per minute and weight 57kg which was within her usual weight in a non- pregnant state. Routine head to toe physical examination was done and there was no anemia, no breast engorgement, uterus not palpable, no deep vein thrombosis and no edema of lower limbs. Menses had not yet returned and no sexual intercourse yet. Mother was ready for family planning and was offered Depo Provera and advised on birth spacing. Mother was transferred to general outpatient department in case of problems.

On physical examination, baby's weight 5000g, head circumference 36cm, crown to heel length 56cm. Baby was given second vaccine according to immunization schedule on the child health card which consists of pentavalent 1, oral polio 1, pneumococcal vaccine type 2 and rotavirus vaccine. The baby was referred to the under 5 clinic in case of any problem and for next immunization at 10 weeks of age. It may on the surface seem like Mrs. N has come for a day 42 postnatal care but this scenario is missing in many of the critical attributes. It does not contain the initial postnatal examination within an hour after birth, at 24hours, day 3 just before discharge and day 7 of postnatal care service.

11. Contrary case

Contrary cases are examples of not the concept.^[10] Mrs. O is a mother of 4 who has delivered at home and never reported at the health facility within 24 hours, on day 3, day 7 and day 42 for a postnatal care service with the baby. This case is the opposite of the critical attributes of the utilization of a postnatal care service. There is missing of all the critical attributes. It does not contain the initial postnatal examination within an

hour after birth, at 24hours, day 3 just before discharge, day 7 and day 42 of postnatal care service.

12. Antecedents

Antecedents are the events or incidents that must be present before the concept occurs.^[10] Before the utilization of a postnatal care service, there should be a health facility, midwife, material resources, childbearing age woman, pregnancy, booked or un booked, PMTCT services, antenatal, aborted or delivered at home or hospital, being term or preterm then hospital visits for postnatal care services within 6 weeks after birth. The pregnant women is expected to know where and when the postnatal care services are available before making a decision to utilize them. An understanding of benefits and importance of the postnatal care services is also a prerequisite on the part of the expectant women so that she will be ready to utilize them. Nurses are required to educate and advise the women during pregnancy about postnatal care services that will be available and why they are to be utilized.

13. Consequences

Consequences are the events or incidents that may occur as a result of the concept^[8]. Lack of care during the postnatal period may result in death of mother and baby or disability as well as missed opportunities to promote healthy behaviors, affecting women, new born, and children.^[12] Moreover, access to family planning in the early postnatal period is also important, and lack of effective postnatal care service contributes to frequent, poorly spaced pregnancies. Lack of emotional and psychosocial postnatal support services to the mother may increase the risk of postpartum depression. The lack of support for healthy home behaviors, such as breastfeeding can have ongoing effects for the child in terms of diarrhea and undernutrition. Additionally, new- born babies and their mothers are frequently lost to follow up during the postnatal period resulting in poor adherence to PMTCT hence increasing the risk of transmission of HIV during breastfeeding because of the resultant high viral load.

14. Empirical referents

Empirical referents are classes or categories of actual phenomenon that by their existence or presence demonstrate the occurrence of the concept itself.^[8] Following utilization of postnatal care service, the mother develops high self-esteem, resiliency, perceived social support, quality of life and hope.^[3] Absence of chronic pain, no impaired mobility, no damage to the reproductive system and fertile demonstrate good results following utilization of postnatal care services.^[7]

15. Implications for Nursing

A knowledge and understanding about utilization of postnatal care services by nurses is necessary for improving quality of service they provide during this critical period. Nurses will be expected to consider educating women during their antenatal care visits. In nursing education more evidence based theory will be presented during nurses and midwifery training. This analysis is expected to stimulate more research to increase understanding about utilization of postnatal care services.

16. Conclusion

In summary, the concept of utilization of postnatal care services was selected for concept analysis because under- utilization has been recognized as a serious problem leading to increase maternal and neonatal mortality and morbidity. Nursing studies and literature also present evidence of the consequences of under-utilization of postnatal care services. However learning about utilization of postnatal care services seems to be an ongoing process. It's the desire of the authors that this concept analysis of utilization of postnatal care services is beneficial to women of child bearing age, nurses and other health care providers in gaining a better understanding of the concept of utilization of postnatal care services. Despite the differences in nature of utilization of postnatal care services, the provided definition of utilization of postnatal care services may facilitate a clearer understanding and standard measurement and reporting of the concept.

17. Reference

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