Original Research Article

Preliminary evaluation of records of antenatal care at sub-centre in Western Maharashtra

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ABSTRACT

Background: Health record are essential for monitoring and evaluation of programmes and routine data collection at facility level. Antenatal care is an important intervention for preventing maternal morbidity and mortality. The aim of study is to assess the antenatal care records at sub-centre level. The objective are evaluation of antenatal registration and completeness of antenatal register.
Methods: A record based cross sectional study was conducted at a sub-centre in Western Maharashtra. Study period was for 1 month. Data collection was done one year i.e., recent record from November 2017 to October 2018 is selected for study.
Results: Out of 141 entries from registers, level of completeness of various data entries in the register were as follows. Mother's name was 100% (141), mother's ID was 69.5% (98), expected date of delivery was 97.87% (138), initial weight of mother was 16.31% (23), tetanus toxoid received by mother was 9% (13). Whereas records of address of mother, height of mother and 4 antenatal visits which includes haemoglobin, blood pressure, urine albumin/sugar details were completely lacking. Only 64.5% (91) of antenatal registration were within 12 week of pregnancy.
Conclusions: Early registration of pregnancy is less and needs to be increased for proper antenatal care. Incomplete records lead to loss of important health data; hence staff should be made aware of the need to keep records updated. Sub-centre-specific reasons for incomplete records e.g., lack of training, lack of time or motivation needs to be identified for improvement.

Keywords: Health records, Antenatal care, Maharashtra

INTRODUCTION

Health records are essential for monitoring and evaluation of programmes and routine data collection at facility level. These data, generated in various health care settings and geographic locations, present opportunities for innovative, efficient, and cost-effective research to inform decisions in health services planning, and public health.[1] Records are important for their content and evidence of communication, decision, actions and history, providing evidence of work activities. Internationally, governments and funding agencies have prioritized use of routinely collected health data as tools to improve patient care, transform health research, and improve health care efficiency.[2] Antenatal record both guides and documents the delivery of good antenatal care (ANC). Early Registration of pregnancy within 12 weeks is one of the recommendations by WHO to ensure good quality of

ANC.[3] Early registration makes it possible to have a good idea of the pre-pregnancy state of the women by noting certain baseline measurements, such as height, weight haemoglobin, blood pressure and urine testing.[4,5] Periodic assessment records of ANC register is often necessary to improve the quality of care and record keeping/completion. Even though online record keeping has been started, register maintenance is still in practice and is recommended by authorities. The information contained in the mother and child protection card should also be recorded in the antenatal register as per the health management information system format.[6,7] The present study is conducted to assess the completeness of records and to assess usefulness of available data to calculate the indicators of ANC.

Aim

The aim of the present study was to assess the ANC records at sub-centre level, to evaluate completeness of antenatal register and to assess usefulness of available records to calculate assessment indicators.

METHODS

It is a record based cross-sectional study in sub-centre of Western Maharashtra. Study period is 1 month (November 2018). Multistage sampling technique was used to select sub-centre. Study was conducted based on the ANC records available for previous 1 year (1st November 2017 to 30th October 2018) in selected sub-centre. All the entries in the R15 register which has information of ANC care were included in the study.

Data was collected by visiting sub-centre. The antenatal register (R15) was assessed for completeness and information was noted. All 141 ANC records available for the period studied were included in the study. Each

element of ANC record was noted as complete/incomplete using pre decided format. Statistical analysis done by using MS Excel and relevant descriptive statistics in the form of percentages were used to describe the data. The data elements that were completed or incomplete were recorded.

RESULTS

The selected sub-centre served 2 villages with total population of 10280. In the duration studied (previous 1 year), record of 141 ANCs was available from the register. Based on available live birth data for 2017-18, the local crude birth rate was 14.85 per thousand populations, expected number of pregnancies in year was 168 while available record was of 141 of pregnancies. This needs to be probed further. Minimum age of mother was recorded is 18 years and maximum age is 32 years. Only 64.5% (91) of antenatal registration were within 12 weeks of pregnancy. Late registration was done till 20 weeks (n=9, 6.38%).

Table 1: Completeness of demographic and obstetric variables in the R15 register.

Recorded attribute	Frequency (n=141)	
	Complete	Incomplete
	N (%)	N (%)
Name	141 (100)	Nil
Age of mother	141 (100)	Nil
Address	Nil	141 (100)
Mother's ID (RCH)	98 (69.5)	43 (30.5)
Last menstrual period	140 (99.29)	1 (0.7)
Estimated date of delivery	138 (97.87)	3 (2.12)
Weeks at ANC registration	141 (100)	Nil

Table 2: Completeness of ANC parameters in R15 register.

| Recorded attribute	Frequency (n=141)	
	Complete	Incomplete
	N (%)	N (%)
Inj. tetanus toxoid	13 (9)	128 (90.78)
Height	Nil	141 (100)
Weight	23 (16.31)	118 (83.69)
ANC visits (4) with parameters like hemoglobin level, blood pressure, urine-albumin or sugar	Nil	141 (100)
Pregnancy outcome (where applicable)	Nil	110 (78.01)

Table 3: Indicators for assessment of pregnant women.

Possible to calculate	Not possible to calculate
Pregnancy rate (13.71 per 1000 population)	Percent of pregnant women with full ANC care
ANC registration rate (83.42%)	TT-2/booster coverage rate
Early registration rate (64.5%)	ANC 4 check-up rate
	ANC moderate/severe anemia rate
	ANC hypertension new case detection rate

Table 1 shows that out of 141 entries, name, and age of mother and weeks of antenatal registration were 100% complete while mother's ID, 69.5% of entries were completely recorded in register. Address was not recorded in 100% of entries.

Table 2 shows record of injection tetanus toxoid (TT) was complete in only 9% while record of height and ANC visits with parameters like hemoglobin level, blood pressure urine albumin/sugar were incomplete in 100% of participants in register.

Figure 1 (A and B) shows distribution of pregnant women as per timing of registration in primi and mutigravida and age wise distribution. Primigravida (64.28%) and multi-gravida (63.53%) were registered in less than 12 weeks. Pregnant women (74.2%) <20 years of age had registered within 12 weeks which is more than for age >25 years (57.7%).
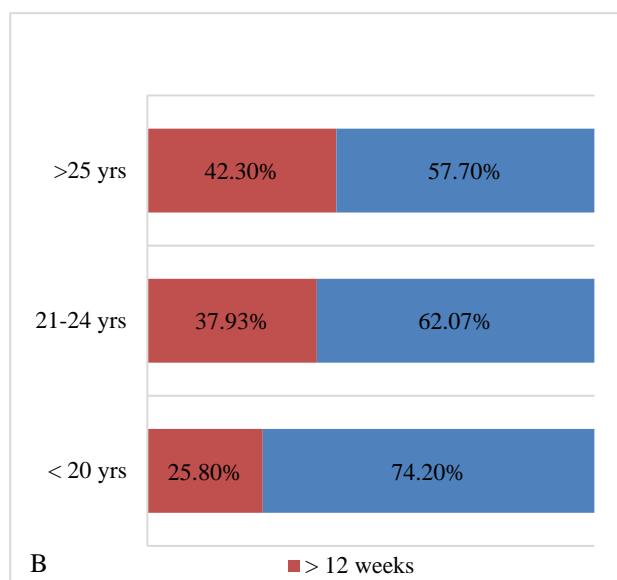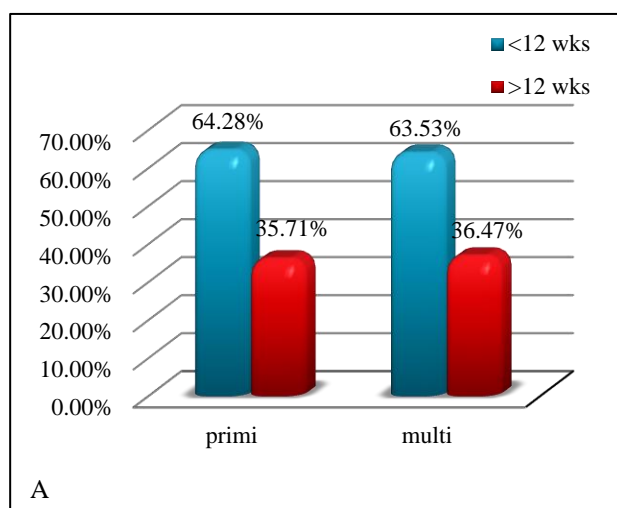
Figure 1: Distribution of pregnant women as per timing of registration; (A) gravida wise distribution; (B) age wise distribution.

DISCUSSION

The study is undertaken to assess the completeness of antenatal register and in our study the overall completeness of register is very low in many important aspects. Similar study done by Schultz et al shows the completeness of mother's ID -99.4%, name-97.4%, para and gravida-65.2%.[8] There was no association found between early antenatal registration and age of mother, parity. In our study, 64.5% (91) of antenatal registration were within 12 weeks of pregnancy, study done by Sable et al shows 44.1% registration were done within 12 weeks of gestation.[9] It was not possible to calculate majority of indicators and the reliability of the ones calculated needs to be assessed further based on completeness of registration of ANCs. One major disadvantage was the recent changes ANC guidelines did not reflect in ANC registers. The records were also compared with online records and were found that data records were incomplete like the ANC registers.

Limitations

This study was undertaken in sub-centre of Western Maharashtra which limits generalisation of the study.

CONCLUSION

Early registration of pregnancy is less and needs to be increased for proper ANC. Incomplete records lead to loss of important health data, hence staff should be made aware of the need to keep records updated. Incomplete data may lead to incorrect reporting. Sub-center-specific reasons for incomplete records e.g., lack of training, lack of time or motivation needs to be identified for improvement.

Recommendations

The overall completion of register is very low, so there should be sensitization training for staff. The preliminary study was undertaken in sub-center of Western Maharashtra which limits the generalization of the study. It is therefore recommended that similar studies can be conducted on larger scale. The data is only useful when it is complete and reliable, so there should be a policy which will strengthen the health system. There should be system to regularly monitor record keeping.

REFERENCES

1. Morrato EH, Elias M, Gericke CA. Using population-based routine data for evidence-based health policy decisions: lessons from three examples of setting and evaluating national health policy in Australia, the UK and the USA. J Public Health. 2007;29(4):463-71.
2. De Coster C, Quan H, Finlayson A, Gao M, Halfon P, Humphries KH, et al. Identifying priorities in methodological research using ICD-9-CM and ICD-10 administrative data: report from an international consortium. BMC Health Serv Res. 2006;6:77.
3. WHO Recommendations on antenatal care for a positive pregnancy experience. Available at: https://apps.who.int/iris/bitstream/10665/259947/1/WHO-RHR-18.02-eng.pdf?ua=1. Accessed on 10 December 2019.
4. Royal College of Obstetricians and Gynaecologists. Clinical Guideline. Antenatal Care Routine Care for the Healthy Pregnant Woman. London: RCOG Press; 2003.
5. World Health Organization. WHO Antenatal Care Randomized Trial: Manual for the Implementation of the New Model. WHO Programme To Map Best Reproductive Health Practices. Geneva: WHO; 2002.
6. Government of India. Guidelines for Antenatal Care and Skilled Attendance at Birth by ANM/LHV/SNS. New Delhi: Ministry of Health and Family Welfare; 2010.
7. Park K. Textbook of Preventive and Social Medicine. 24 ed. Jabalpur: M/S Banarasidas Bhanoth Publishers; 2017: 561.
8. Schultz L. Record-keeping in the antenatal care register in Tshwane District, Gauteng Province. 2016: 1-102.
9. Sable, Pavan SM. Association of early registration of pregnancy with ANC visits during pregnancy and birth. Glob J Res Anal. 2017;6(6):21-3.