

Clinical Audit on Effective Usage of Partogram in Obstetric Unit B of DGH-Kaluthara from 01st of March to 31st of May 2016

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WHO recommend partogram for universal use during labour as a necessary tool. Continuous monitoring during labour provides a safe care. Further it prevents adverse outcomes relating to child birth. The tool helps to identify deviations early and intervene timely. Annually a huge sum of money is spent on maternal health by the government of Sri Lanka to deliver a free health care to the public. The maternal mortality reported to be low despite Sri Lanka been a developing country. Hence, it is the duty and responsibility to keep the statistics further low and maintain excellent quality of care with the available resources.

Since partogram can detect obstructed labour early, it helps to reduce maternal deaths by preventing uterine rupture, post partum haemorrhage and puerperal infections. Perinatal mortality reduces when traumatic deliveries are less. It is appreciate the use of the tool as it is simple, inexpensive and freely available. The goal of this audit is to assess the effective use of partogram in the local setting.

A descriptive study was conducted in obstetric unit B of DGH-Kalutara. The total of 571 of deliveries in March, April and May 2016 were selected for the audit. Effective usage of partogram was assessed by executing partograms of relevant BHTs. Data collection and analysis was done by the auditor.

Client information is included in majority of partograms. Position, caput, moulding, cervical dilatation, contraction free interval, duration of contraction and abdominally descent were not marked in the majority and the technical errors noted during marking.

Practical issues in monitoring and documenting of contraction free interval and duration of contraction should be addressed. Maternal monitoring and second stage foetal monitoring should be encouraged. A proper training programme of National Partogram should be arranged.

Keywords—national partogram of Sri Lanka, labour management, clinical audit

I. INTRODUCTION

A partogram is a composite graphical record of events of labour (maternal and fetal) entered against time on a single sheet of paper. Relevant measurements might include statistics such as cervical dilation, fetal heart rate, duration of labour and vital signs.

National Partogram of Sri Lanka was newly introduced by Sri Lanka College of Obstetricians and Gynecologists as proposed in 2013.

II. JUSTIFICATION

Annually a huge sum of money is spent on maternal health by the government Sri Lanka as its free health system and has achieved less number of maternal mortality almost as a developed country. So it is our sole responsibility to stick to our health goals and negotiate obstacles on our way.

As effective usage of partogram can early detect obstructed labour it reduces maternal mortality by preventing ruptured uterus, post partum haemorrhage and puerperal infections. And traumatic delivery can be avoided by reducing perinatal mortality.

Early detection of adverse outcomes by this simple, inexpensive tool should be used effectively.

This study is aimed to explore the effective usage of partogram in obstetric unit B.

III. METHOD

A descriptive retrospective study was conducted in obstetric unit B of DGH-Kalutara. Total number 571, of deliveries in March, April and May 2016 were selected for the audit. No sampling done. Effective usage of partogram was assessed by executing partograms of relevant BHTs. National partogram of Sri Lanka was used as the study instrument.

Emergency caesarean sections which were directly sent to the operation theatre from obstetric ward and elective caesarean sections were excluded since partogram maintaining is not relevant.

IV. LIMITATIONS

Following limitations were identified during this audit, Only 82.04% (n=345) of relevant BHTs were found from medical records unit.

Executer bias cannot be excluded since relevant BHTs and partograms were executed by the auditor himself.

Some technical errors (ex; incorrect symbols) in maintaining partogram were not considered since almost all partograms were found to have same technical error.

V. STUDY FINDINGS

A. Statistics of the Period of Interest

Table A1: Statistics of the period of interest in Obs unit B DGH-Kalutara.

	March 2016	April 2016	May 2016	Total
NVD	112	105	125	342
LR-EM/LSCS	13	30	29	72
Vaccum Deliveries	2	2	1	5
Forceps Deliveries	1	1	1	3
Breech Deliveries	1	0	0	1
Twin Deliveries(Vaginal)	1	1	0	2
IUD(Vaginal Delivery)	1	1	0	2
Total	129	140	154	423
BHT found	120	108	117	345
% of BHT found	93.02%	77.14%	75.97%	82.04%
Total No of Births of Unit B	185	179	207	571

According to ward statics 423 relevant deliveries were occurred during the period of interest and only n=345 (82.04%) BHTs were found due to logistic problems and included for the audit.

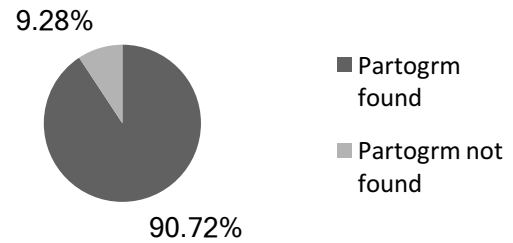
B. Details of Partogram Attached in the BHTs

Table B1- Details of Partogram attached in the BHTs of relevant deliveries

	Number	%
Partogram Not Found	32	9.28%
Partogram Found	313	90.72%

Graph B1- Percentage of Partogram attached in the BHTs of relevant deliveries.

Percentage of Partogram attached in the BHTs



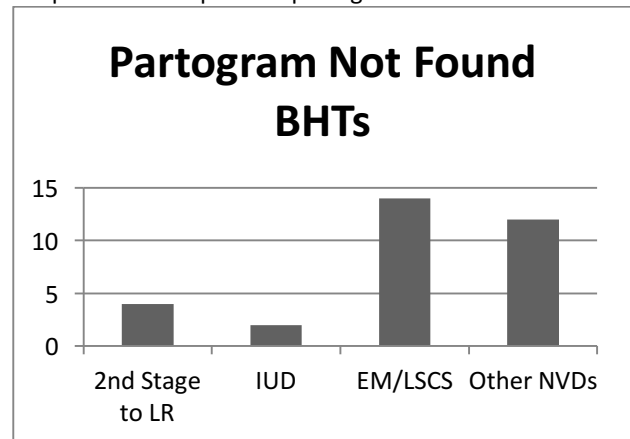
Majority of relevant BHTs were attached with a partogram(90.72%,n=313) and n=32,9.28% of relevant BHTs were found to have without partogram.

Partogram not found BHTs were further described as follows.

Table B2 –Description of partogram not found BHTs

Partogram Not Found	Number
2 nd Stage admission to LR	4
IUD	2
EM/LSCS	14
Other NVDs	12

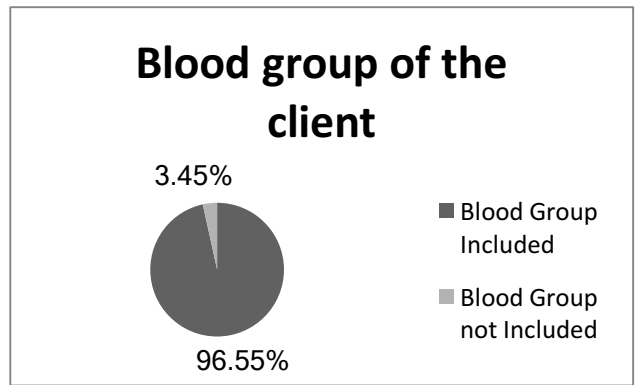
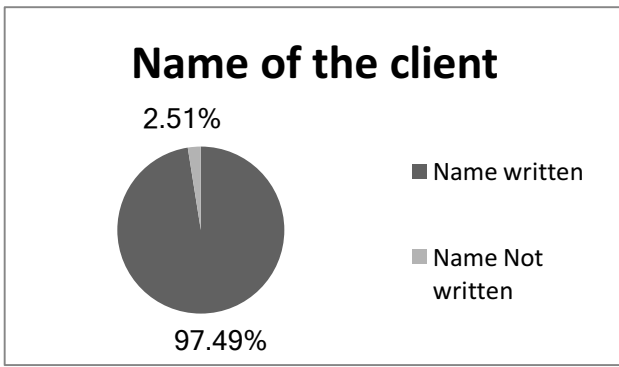
Graph B2 –Description of partogram not found BHTs



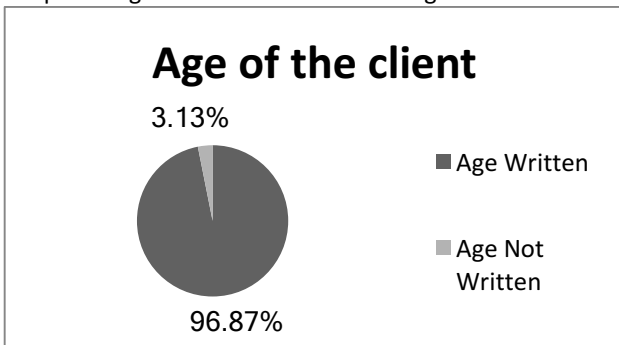
C. Information of the Client in the Partogram

i) Name of the client in the Partogram:

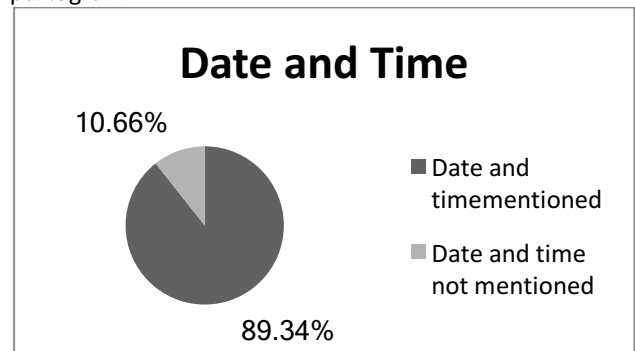
Graph C1-Name of the client in the Partogram



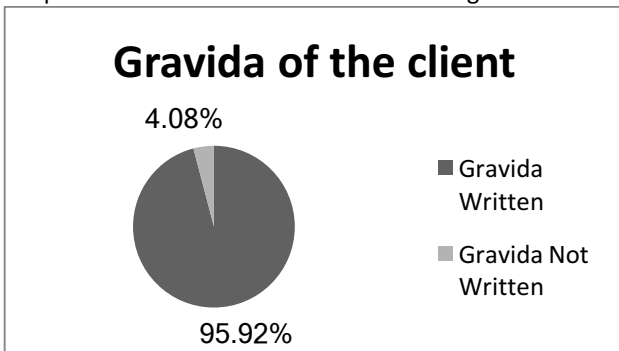
ii) Age of the client in the Partogram:
Graph C2-Age of the client in the Partogram



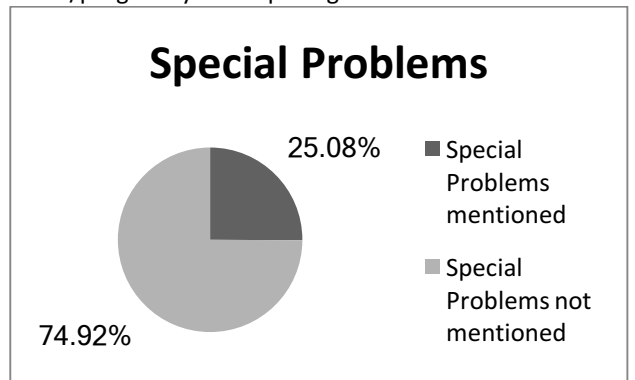
vi) Date and time of onset of Partogram;
Graph C6- Mentioning of the date and time of onset of partogram



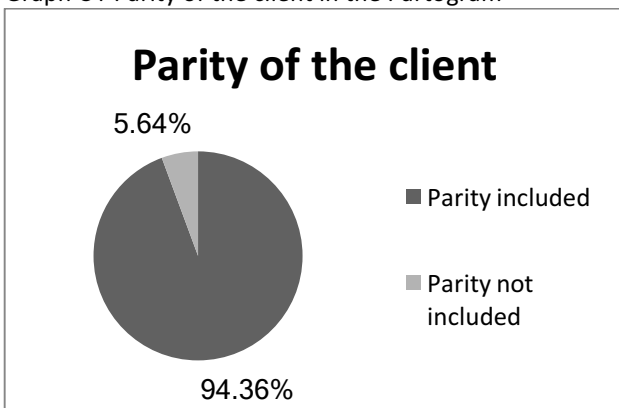
iii) Gravida of the client in the Partogram:
Graph C3-Gravida of the client in the Partogram



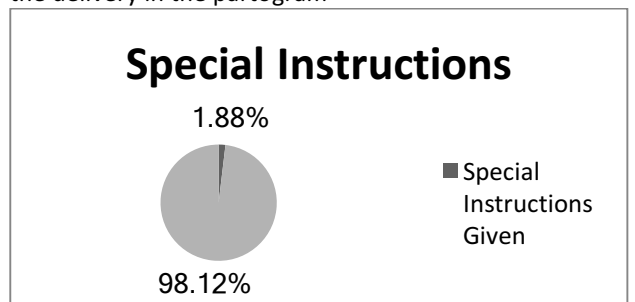
vii) Special problems of client/pregnancy in the partogram;
Graph C7- Mentioning of special problems of client/pregnancy in the partogram



iv) Parity of the client in the Partogram:
Graph C4-Parity of the client in the Partogram



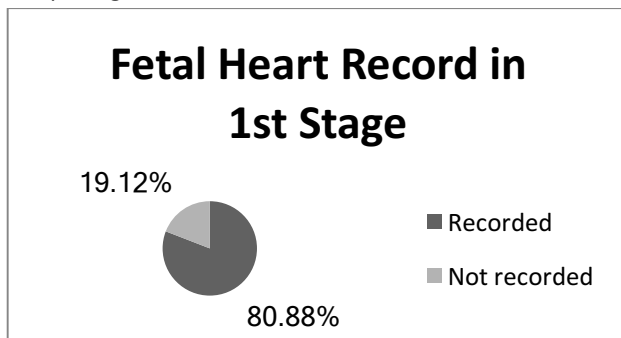
viii) Special instructions regarding delivery in the partogram;
Graph C8- Mentioning of special instructions regarding the delivery in the partogram



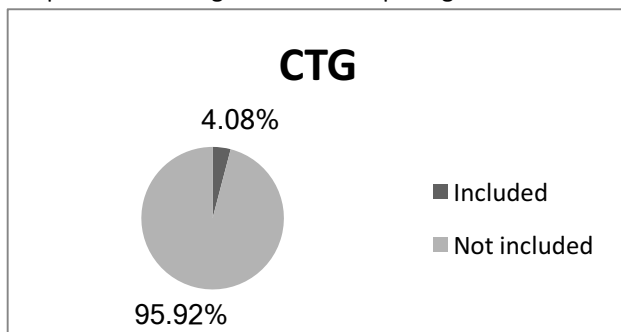
v) Blood group of the client in the Partogram:
Graph C5- Blood group of the client in the Partogram

D. Monitoring of Foetal Wellbeing During the Labour in the Partogram

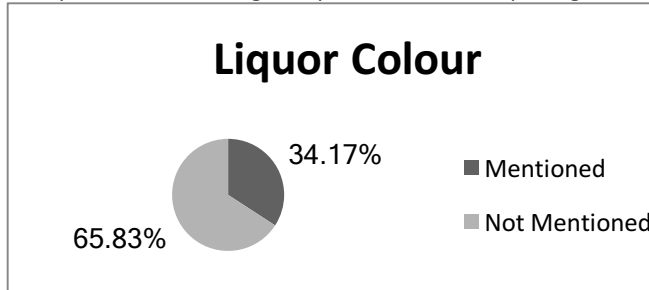
i) Fetal Heart Record in 1st Stage in the partogram;
Graph D1-Recording of Fetal Heart Rate in 1st Stage in the partogram



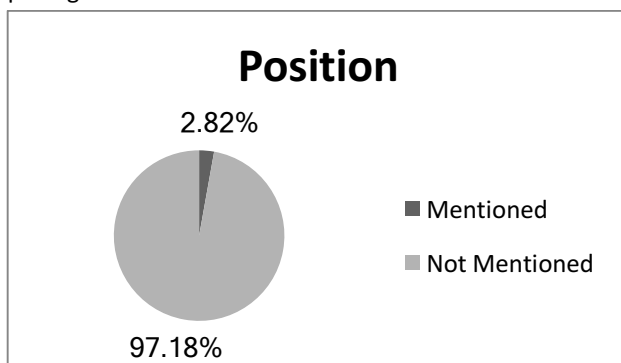
ii) CTG in the partogram;
Graph D3- Including of CTG in the partogram



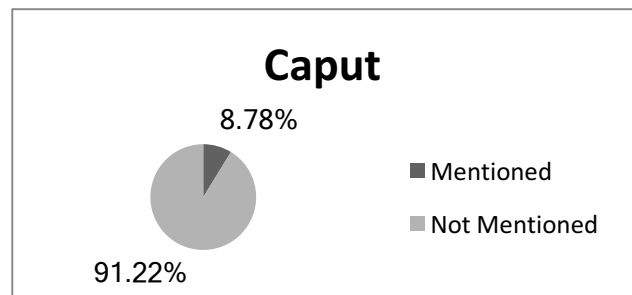
iii) Liquor colour in the partogram;
Graph D3- Mentioning of liquor colour in the partogram



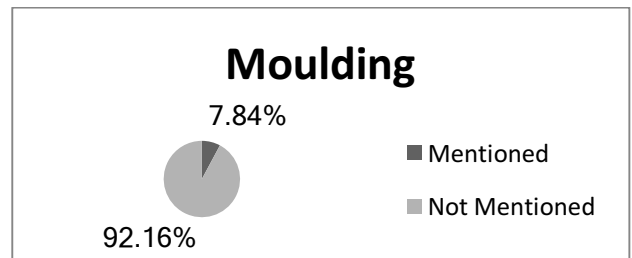
iv) Position of the foetus in the partogram;
Graph D4- Mentioning of position of the foetus in the partogram



v) Caput in the partogram;
Graph D5- Mentioning of caput of the foetus in the partogram

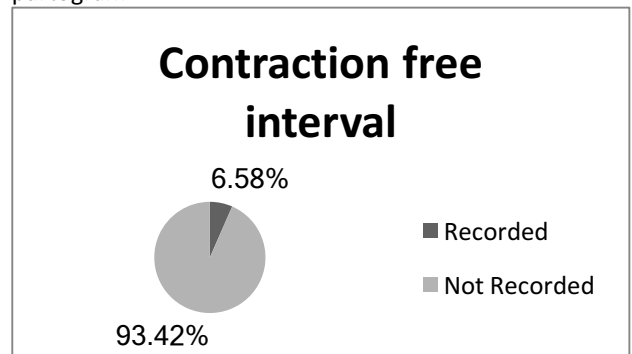


vi) Moulding of the foetal skull in the partogram
Graph D6- Mentioning of moulding of the foetal skull in the partogram

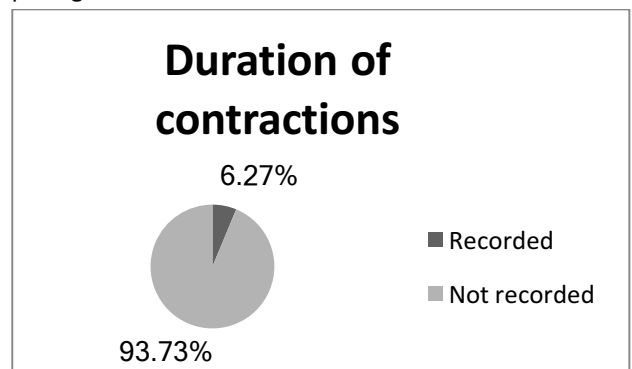


E. Progress of the Labour in the Partogram

i) Contraction free interval in the partogram;
Graph E1- Recording of Contraction free interval in the partogram

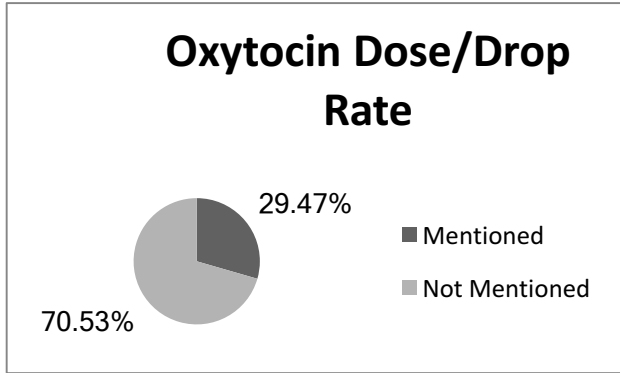


ii) Duration of contractions in the partogram;
Graph E2- Recording of Duration of contractions in the partogram

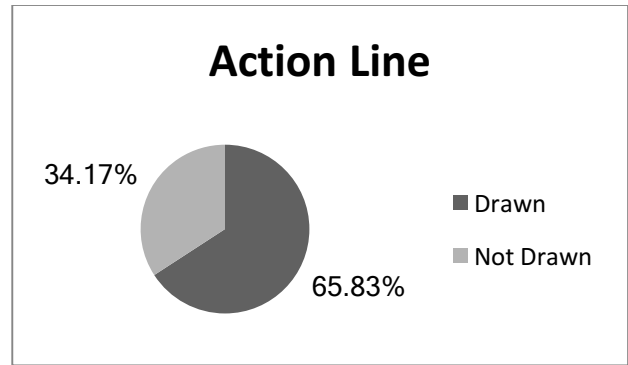


iii) Oxytocin Dose/Drop Rate in the partogram;

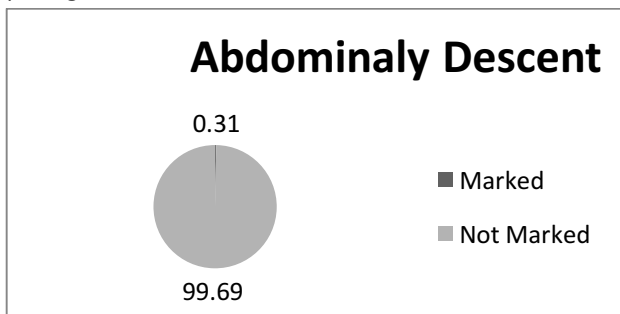
Graph E3- Mentioning of Oxytocin Dose/Drop Rate in the partogram



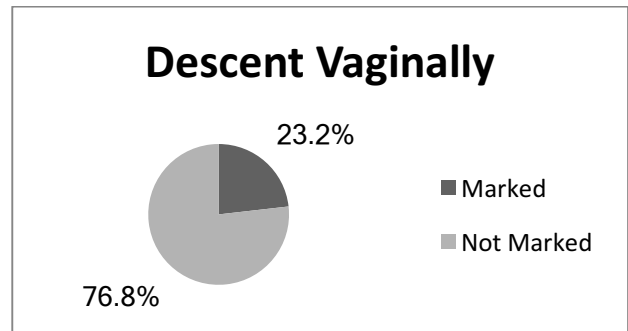
Vii} Action line in the partogram:
Graph E7- Drawing of action line in the partogram



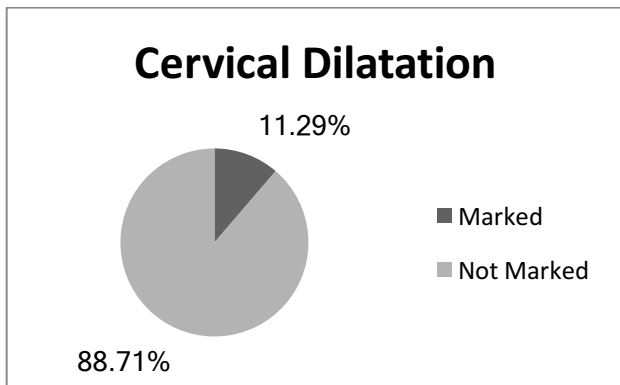
iv}Abdominally Descent in the partogram;
Graph E4- Marking of Abdominally Descent in the partogram



Viii}Descent Vaginally in the partogram:
Graph E8- Descent Vaginally in the partogram

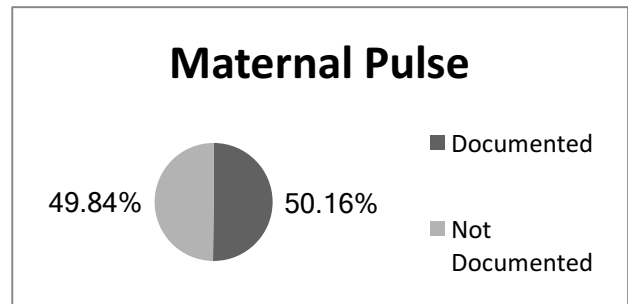


v} Cervical dialatation in the partogram;
Graph E5- Marking of cervical dialatation in the partogram

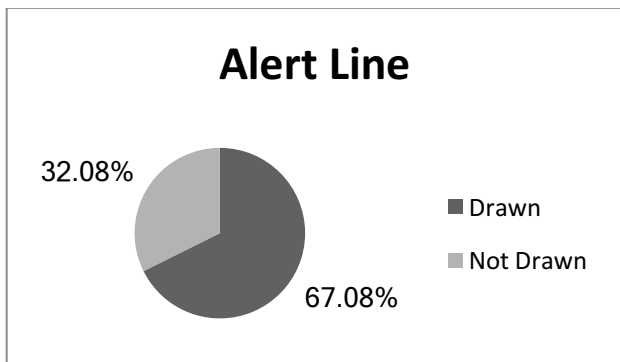


F. Monitoring of Maternal Wellbeing During the Labour in the Partogram

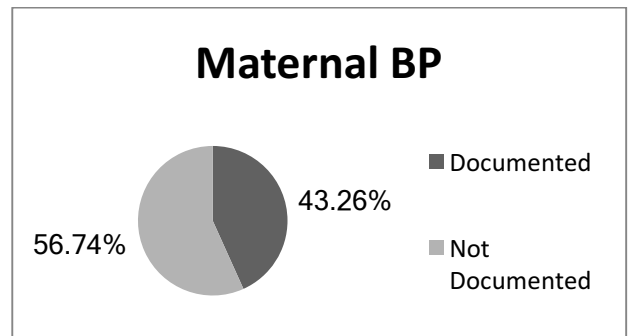
i}Maternal pulse in the partogram:
Graph F1- Documenting of Maternal pulse during labour in the partogram



Vi} Alert line in the partogram:
Graph E6- Drawing of alert line in the partogram

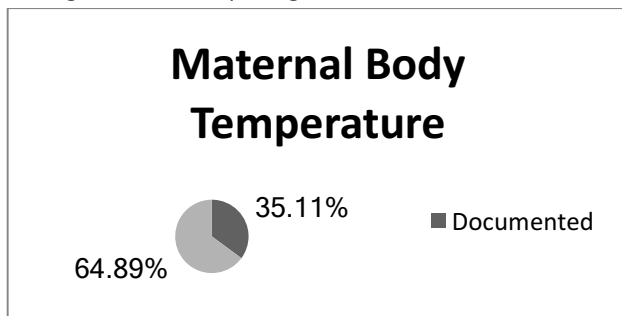


ii}Maternal blood pressure in the partogram:
Graph F2- Documenting of Maternal blood pressure during labour in the partogram



iii} Maternal body temperature during labour in the partogram:

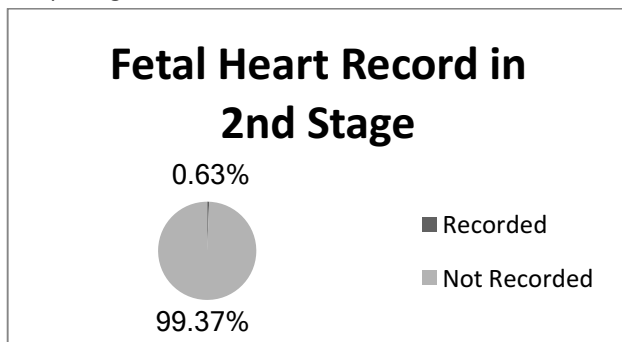
Graph F3- Documenting of Maternal body temperature during labour in the partogram



G. Monitoring of the 2nd stage of Labour

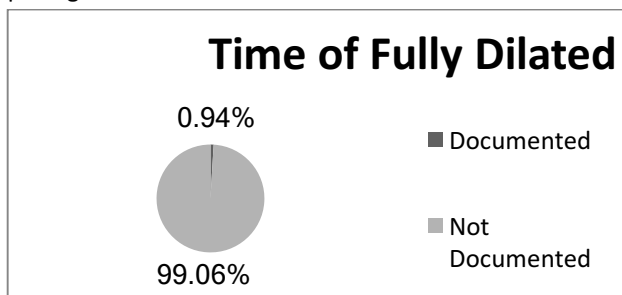
i} Fetal Heart Record in 2nd Stage in the partogram:

Graph G1- Recording of Fetal Heart Record in 2nd Stage in the partogram



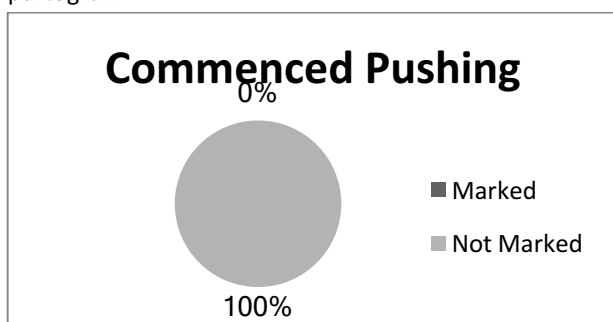
ii} Time of Fully Dilated in the partogram:

Graph G2- Documenting of Time of Fully Dilated in the partogram



iii} Marking of Commenced Pushing in the partogram:

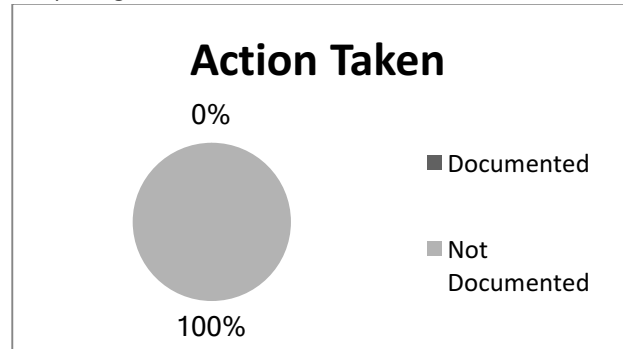
Graph G3- Marking of Commenced Pushing in the partogram



H. Action Taken

i} Action taken during labour in the partogram:

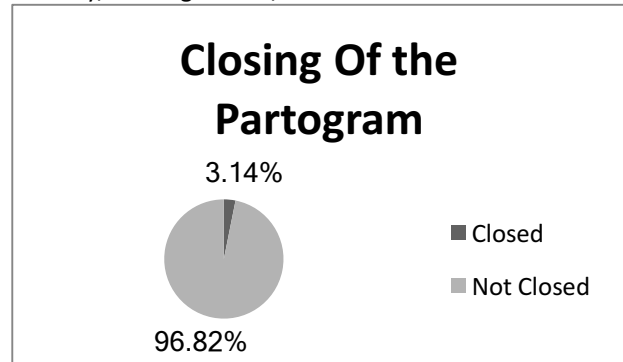
Graph H1- Documenting of Action taken during labour in the partogram



I. Closing of the Partogram

i} Closing of the partogram:

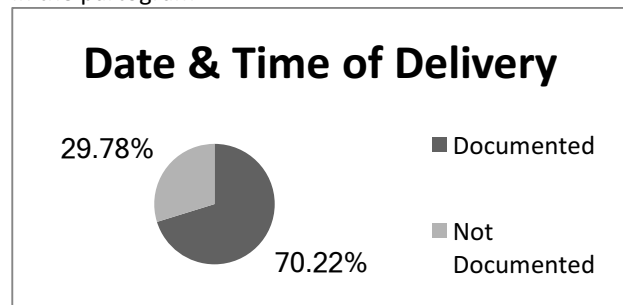
Graph I1- Closing of the partogram at the end of the delivery/sending for EM/LSCS.



J. Date and Time of the Delivery

i} Date and Time of the Delivery:

Graph J1- Documenting of date and time of the Delivery in the partogram

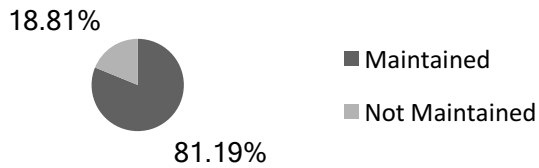


K. Post Partum Modified Early Warning System

i} Maintaining of Post Partum Modified Early Warning System:

Graph K1- Maintaning of Post Partum Modified Early Warning System

Post Partum Modified Early Warning System



VI. DISCUSSION

This audit provides an overview of effective usage of partogram obstetrics unit B, General Hospital, Kalutara. Partograms of relevant BHTs from 1st March 2016 to 31st May 2016 were assessed.

Total number of birth in study period was 571 and after applying exclusion criteria 423 deliveries were selected but, only 345 (82.04% of relevant BHTs) found due to logistic issues.

A. Details of Partogram attached/Not attached in the BHTs

Majority of relevant BHTs were attached with a partogram (90.72%, N=313) and n=32, 9.28% of relevant BHTs were found to have without a partogram.

N=313 is used for statistical purposes throughout the execution.

Relevant BHTs without a partogram (9.28%, n=32) were further described as 2nd stage admission to LR (n=4), IUDs (n=2), EM/LSCS (n=14) and other NVDs (n=12).

B. Information of the Client in the Partogram

Information of the client were completed in majority of partograms as name of the client 97.49%, n=311, age 96.87%, n=309, gravida 95.92%, n=306, parity 94.36%, n=301, blood group 96.55%, n=308.

Date and time was mentioned in 89.34%, n=285 partograms.

In majority of the partograms special problems (25.08%, n=80) and special instructions (1.88%, n=6) were not given.

C. Monitoring of Foetal Wellbeing During the Labour in the Partogram

Foetal heart rate in 1st stage of labour was recorded in the majority (80.88%) while 19.12% of partograms were not recorded.

Comment of CTG was included only in 4.08%, n=13 partograms.

Liquor colour mentioned in 34.17%, n=109 partograms while position (2.82%, n=9), caput (8.78%, n=28) and moulding (7.84%, n=25) mentioned in minimal number of partograms.

D. Progress of the Labour in the Partogram

Contraction free interval (6.58%, n=21) and duration of contraction (6.27%, n=20) were recorded in very few partograms technical errors of recoding were noted in each and every partogram which were recorded.

Oxytocin drop rate mentioned only in 29.47%, n=94 partograms.

Abdominally descent was marked only in one partogram (0.31%, n=1) and it was technically incorrect.

Cervical dilatation was marked only in 11.29%, n=36 partograms.

The majority of the partograms alert line (67.08%, n=214) and action line (65.83%, n=210) were drawn.

Descent vaginally was marked only in 23.2%, n=74 partograms but correct technique was not followed in marking.

E. Monitoring of Maternal Wellbeing During the Labour in the Partogram

Maternal pulse was documented in only 50.16%, n=160 partograms and maternal blood pressure (43.26%, n=138), maternal body temperature (35.11%, n=112) were recorded only in minority.

F. Monitoring of the 2nd stage of Labour

Fetal heart record in 2nd stage was noted only in two partograms (n=2, 0.63%).

The time of fully dilated was noted only in three partograms (n=3, 0.94%).

Commenced pushing was not documented in any of partogram (n=0, 0%).

G. Action Taken

Action taken was not documented in any partogram executed (0%, n=0).

H. Closing of the Partogram

Partogram was closed only in 3.14%, n=11.

I. Date and Time of the Delivery

In the majority (70.22%, n=224) date and time of delivery documented in the Post Partum Modified Early Warning System.

J. Post Partum Modified Early Warning System

In the majority (81.19%, n=259) Post Partum Modified Early Warning System was maintained but technique was not assessed.

VII. CONCLUSION

This study assessed the effective usage of partogram.

Client information is included in majority of partogram.

Position, caput, moulding and CTG comments, were not included in majority.

Contraction free interval, duration of contraction and abdominally descent were not marked in the majority and the technical errors noted during marking.

Though alert line and action line were drawn frequently cervical dilatation was not marked in the majority.

Maternal monitoring during labour was not documented in the majority.

Action taken was not documented in the partogram.

Fetal monitoring of the 2nd stage is not documented in almost all the time.

Closing of the partogram was done hardly.

Date and time of the delivery and Post Partum Modified Early Warning System was maintained in majority.

VIII. RECOMMENDATIONS

Value of partogram in monitoring during the labour should be discussed.

Training programme on maintaining of National Partogram should be arranged and encouraged.

Practical issues in monitoring and documenting of contraction free interval, duration of contraction should be addressed.

Practical issues in monitoring and documenting in the 2nd stage of labour should be discussed.

Importance of maternal monitoring during labour should be highlighted.

Reaudit should be done after a proper training programme in the days to come.

Further studies on maintaining partogram should be encouraged.

REFERENCES

Lavender T, Hart A, Smyth RMD, Effect of partogram use on outcomes for women in spontaneous labour at term, Cochrane Library, www.cochrane.org;10 July 2013.

Management of labour, Clinical guidance, Sri Lanka Journal of Obstetrics and Gynaecologists. 2013 Dec; Pages 130,www.slkog.lk/sljog.

Fernando TRN, Pregnancy and labour, first edition,2015 sept;39,40(78)

Park K.; Park's Text Book of Preventive & social Medicine, 20th edition 2009 Feb; 19(745).

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