



NATIONAL OBSTETRIC INFORMATION SYSTEM (NOIS)

WHO-OBSQID PROJECT, MALTA

First Quarterly Report: January to March 2001

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INTRODUCTION

The National Obstetric Information System (NOIS) was launched at a 'Case-Based' level in the beginning of 1999 and now covers practically all deliveries taking place on the islands of Malta and Gozo. NOIS was developed from the WHO-OBSstetric Quality Indicator Data collection (OBSQID) Project.

This is the third year since its introduction that NOIS has become a central source of national obstetric information. NOIS supplies data to the Private and Public maternity centres, the World Health Organisation (HFA and OBSQID projects) and to non-medical professionals.

NATIONAL OBSTETRIC INFORMATION SYSTEM

NOIS has a standard data collection sheet that uses standard epidemiological indicators, operational definitions of events and outcomes which are based on the WHO/EURO-OBSQID Project. The submitted sheets are sent to the Department of Health Information (DHI) where the data are processed and entered into a NOIS database. In addition to the paper based publications, NOIS reports can also be found on the web at <http://www.magnet.mt/services/health/ministry/dhi/nois>.

THE DATABASE

The data input into the system is based on the National Obstetric Information System (NOIS), sheet which are filled on site by hospital staff. The standard NOIS sheet used for data recording is mainly based on 4 sections. Details about the mother, present pregnancy, delivery and infant are recorded on a daily basis after the delivery has occurred. Once the forms are completed they are sent to the DHI. At the DHI the recorded diagnosis are coded according to the International Classification of Diseases Tenth Revision (ICD-10) and data are entered into a computer database. In order to attain the objectives of this system, data entered are routinely validated and a report is published to all system partners.

ANALYSIS

*This report analyses, the **national deliveries and births** that occurred in the first three months of this year and compares it to the same period of last year, where possible (published summary report 1st quarter 2000).*

The data in this report gives the birth statistics for all maternities (Maltese and non-Maltese) registered into the system.

There were a total of 948 deliveries registered in the Maltese islands for the first quarter of this year, which resulted in a total of 963, births.

When comparing these figures to the same period last year one can see that the number of deliveries and consequently the births decreased by 129 and 131 respectively (*deliveries:1077, births:1094-1st quart. '00*).

MATERNAL AGE, MARITAL STATUS, NATIONALITY and PARITY

The maternities have been grouped according to the standard age groupings and the frequency distribution of deliveries according to maternal age at delivery has been analysed. In the first quarter of this year, the greatest number of deliveries (38%), occurred in the age group 25 to 29 years while the lowest number of deliveries (2% &

<1%) occurred in the age group 40 to 44 and 45 plus years. The minimum age of the mothers was 15 years while the maximum age was 45 years. The most frequent age at delivery was 27 years.

The grouped frequency distribution of deliveries according to maternal age are given in the table below

<i>Age grp.(yrs)</i>	<i>1st Quarter 2001</i>	
	<i>Frequency</i>	<i>%</i>
<15	-	-
15-19	57	6
20-24	186	20
25-29	362	38
30-34	239	25
35-39	80	8
40-44	23	2
45+	1	<1

For the first quarter of this year, there were 12% (111) of all deliveries that occurred to mothers who were never married (single) while 88% (836) of deliveries occurred to mothers who were married once (married, widowed, separated). The remaining delivery had no marital status specified. 95% (904) of all deliveries this quarter, occurred to women of Maltese nationality while 4% (42) were Non-Maltese. The remaining 2 deliveries were not specified.

There were 49% (462) of mothers who were primiparas while 51% (486) were multiparas in the first quarter of this year. For the same period last year the primipara and multipara rate were 45%(485) and 55% (592) respectively.

MATERNAL LIFESTYLES

There were 7% (71) of mothers who smoked either 1 to 3 cigarettes or more during pregnancy in the first quarter of this year. When comparing these figures to the same quarter of 2000, it can be seen that the smoking habits of mothers decreased by 2% in this year's quarter (9% (98)-*1st quart. '00*).

The table below gives the smoking, alcohol and drug habits of mothers for the first quarters of 2001 and 2000.

<i>1st Quarters</i>	<i>2001</i>	<i>2000</i>
	<i>No.</i>	<i>No.</i>
<i>Cigarette smoking during pregnancy:</i>		
➤ 1 to 3/day	17	13
➤ >than 3/day	54	85
➤ Do not smoke	876	976
➤ Unspecified	1	3
<i>Alcohol consumption during pregnancy:</i>		
➤ Up to 1unit/day	-	2
➤ >than 1unit/day	1	-
➤ None	947	1074
➤ Unspecified	-	1
<i>Drug Abuse during pregnancy</i>		
➤ Yes	2	1
➤ No	946	1074
Unspecified	-	2

PATHOLOGY DURING PREGANANCY

The table below gives the number of mothers for the first quarters of this year and 2000, recorded with a specific obstetric pathology during pregnancy. There were 5% of mothers who had gestational hypertention this quarter while for the same period last year this rate was at 8%.

<i>Pathology recorded during pregnancy</i>	1st Quarter 2001			1st Quarter 2000		
	<i>Yes</i>	<i>None</i>	<i>Unspec.</i>	<i>Yes</i>	<i>None</i>	<i>Unspec.</i>
	No.	No.	No.	No.	No.	No.
Antepartum Haemorrhage:	9	938	1	17	1060	-
Gestational hypertention:	43	904	1	87	989	1
Pre-eclampsia:	2	945	1	7	1070	-
Placenta praevia:	-	947	1	2	1074	1
Abruption of plcenta:	4	942	2	3	1074	-
Assisted fertilisation (ART):	3	944	1	11	1065	1
Cardiovascular disease:	-	944	4	3	1066	8

Diabetes in pregnancy

Diabetes in pregnancy is recorded into the standard NOIS sheet according to the data recorded in the 'Booking Sheet', 'The Baby Book' and the entry note by the doctor in the personal file of the mother.

In the first quarter of this year, there was 1 mother who was registered as being Insulin Dependent Diabetic before this pregnancy while there were no mothers recorded with Non-Insulin Dependent diabetes. In addition, there were a total of 4 mothers registered with gestational diabetes, of these 1 was treated with insulin while the other 3 were controlled without the use of insulin.

ULTRASONOGRAPHY

According to NOIS for the first quarter of this year, there were 33% (311) of mothers who had two ultrasounds carried out during pregnancy while 6% (54) had more than five scans. The table below gives the number and rate of ultrasound scan carried out during pregnancy.

<i>1st Quarter 2001</i>		
<i>No of Scans</i>	<i>No.</i>	<i>%</i>
1	192	20
2	311	33
3	210	22
4	112	12
>5	54	6
Unspecified	69	7

CATEGORY OF MATERNITY ACCORDING TO DELIVERY

For the first quarter of this year, there were a total of 933 (98%) singleton and 15 (2%) twin deliveries. When comparing these figures to last year's quarter for the same period one can see that these rates remain unchanged (see table below).

	<i>1st Quarters</i>	
	<i>2001</i>	<i>2000</i>
<i>Category</i>	<i>No.</i>	<i>No.</i>
Singleton	933	1060
Twin	15	17
Triplet	-	-
Quadruplet	-	-

METHOD OF BIRTH

In the first quarter of this year, there were 72% (697) of births that were delivered by vertex delivery, 24% (232) by emergency or elective Caesarean section and 4% (34) by assisted vaginal delivery (includes forceps, ventouse and breech).

When comparing the method of birth to last year's first quarter, it can be seen that the vertex deliveries increased by 1% while the Caesarean section births decreased by 1% this year (*1st quarter 2000: vertex: 778(71%), C section: 271(25%), assisted vaginal delivery: 45(4%).*

	<i>1st Quarters</i>	
	<i>2001</i>	<i>2000</i>
<i>Method of Birth*</i>	<i>No.</i>	<i>No.</i>
Infants delivered by vertex delivery	697	778
Infants delivered by elective CS before labour	112	120
Infants delivered by emergency CS before labour	11	15
Infants delivered by elective CS during labour	2	7
Infants delivered by emergency CS during labour	107	129
Infants delivered by forceps	4	8
Infants delivered by ventouse	29	34
Breech deliveries	1	3

Note: Data analysed according to total birth (963)

BIRTHWEIGHTS AND GENDER OF BIRTHS

In the first quarter of 2001, there were 94% (904) of the total births (963) that occurred in the birth weight range of 2500g to 4999g. While 5% (47) of the total births were in the low birth weight range of 1500g to 2499g. The remaining 1% (9) of births were of very low birth weight (500g to 1499g). When comparing these birthweights to the same period last year, it can be seen that the rates this year remain unchanged (see table below).

<i>Birthweight(g)</i>	<i>1st quarter 2001</i>	<i>1st quarter 2000</i>
<500g	-	-
500-1499g	9	9
1500-2499g	47	58
2500-4999g	904	1023
5000+	-	-
Unspecified	3	4
Average Birthweight	3251	3257

The male and female distribution of births in the first quarter of 2001 was 489 and 474 respectively.

OUTCOME OF BIRTH

The number of live births for the first quarters of this year and last year were 957 and 1087 respectively which accounted for 99% of the total birth rate at a national level. The remaining 1 % accounted for the stillbirths and the early neonatal deaths. There were no late neonatal deaths that occurred in the period under review (see table below).

Outcome of Birth	<i>1st quarter 2001</i>	<i>1st quarter 2000</i>
Babies alive after 28 days	957	1087
Stillbirths	4	3
Early Neonatal deaths	2	4
Late Neonatal deaths	-	-

BREAST FEEDING WITHIN 30 MINUTES OF DELIVERY

In the first quarter of this year there were 48% of infants that were breast fed within 30 minutes of birth while 52% were not breast fed. When comparing these figures to last years first quarter, one can see that there was an 18% increase in the number of infants who were breast fed within 30 minutes of birth (*1st quart. 2000: 30% breast fed, 70% not breast fed.*)

Breast feeding within 30mins. of delivery	<i>1st quarter 2001</i>	<i>1st quarter 2000</i>
	<i>No.</i>	<i>No.</i>
Infants breast fed	463	324
Infants not breast fed	499	769
Unspecified	1	1

INFANT FEEDING METHODS AT DISCHARGE

Infant feeding habits are recorded by hospital staff at the time of discharge, little can be said on the actual infant feeding habits from the numbers given below as these may change soon after discharge from the birthing facilities.

Infant feeding methods at time of discharge	<i>1st quarter 2001</i>	<i>1st quarter 2000</i>
	<i>No.</i>	<i>No.</i>
Breast only	497	544
Bottle only	339	389
Mixed (Breast & Bottle)	84	136
Other	2	5
Unspecified	41	20

CONCLUSION

There has been a long delay in issuing this first quarterly report largely because of the lack of staff available at the main public hospital to collect NOIS data. However, with the help of the nursing manager (Obstetrics & Gynaecology), nursing officer-midwives at the Labour ward and two of the enrolled nurses at the Post Natal ward we were able to publish this report. I would like to take this opportunity and thank each and everyone for their proactive approach and team spirit in helping to overcome this crisis.

Data collection for NOIS from the main public hospital will take on a new form in order to reach a long-term solution to this on going problem. NOIS was introduced to the midwives at the Labour ward (KGH) and it was agreed by all concerned that the 'midwife in charge of the delivery' fill the NOIS sheets. However, this shift of data recording brings on new problems with regards to data capture from the post-natal ward, Special Care Baby Unit and the Labour ward. Consequently it was agreed to have a member of staff at the Post Natal ward as a central data source for the pooling of the NOIS sheets, collection of missing data and for forwarding to the DHI. The Director, Obstetrics and Gynaecology was informed about the forthcoming changes to the data collection process of NOIS from his department and has given his full support.

Furthermore, I would like to thank the private birthing facilities and the other public hospital for the diligent and prompt submission to NOIS. The success of this national hospital based information system is primarily due to the active partnership of all its partners.