RESUTLS

Part I

Findings raised From fulfillment of the first part of the check list (determination of the Q.I.) (Tables)

- Distribution of the primary health care facilities in Benha and Kafr Shoker districts (table 1).
- Distribution of the Quality index grades (Q.I.) of the general resources (Table 2).
- Distribution of the quality index grades of the unit administration (Tables 3).
- Distribution of the quality index grades (Q.I.) of the lab. services (Tables 4).
- Mean percentage of the quality indices values of the general resources, unit administration, lab services and antenatal and post natal services (Tables 5, 6).
- Mean percentage of the compliance with the different criteria of the antenatal and post natal services (Tables 7, 8, 9, 10, 11).
- Mean percentage of the non compliance with the criteria of the general resources of the P.H.C. facilities (Tables 12, 13).
- Mean percentage of the non compliance with the criteria of the unit administration of the P.H.C. facilities (Tables 14, 15).
- Mean percentage of the non-compliance with the criteria of the lab. services of the P.H. C. facilities (Tables 16, 17).
- Mean percentage of the non-compliance with the criteria of the ante-natal and postnatal services of the P.H.C. facilities (Tables 18, 19).

Table (1): Distribution of the primary health care facilities providing maternal health services in Benha and Kafr Shoker districts.

Facilities \ District	Benha (n = 30)		Kafr shoker (n = 11)		Total (n= 41)	
	No	%	No	%	No.	%
R.H.U (n= 29)						
Developed	11	36.9	7	63.6	18	43.9
Undeveloped	10	33.3	1	9.1	11	26.9
C.R.H.U (n = 6)						
Developed	3	10.0	1	9.1	4	9.8
Undeveloped	1	3.3	1	9.1	2	4.9
I.R.H.U (n = 2)						
Developed	1	3.3	0	0.0	1	2.4
Undeveloped	1	3.3	0	0.0	1	2.4
U.H.C (n = 1)						
Developed	1	3.3	1	9.1	2	4.9
Undeveloped	0	0.0	0	0.0	0	2.4
Urban MCH (n =2)						
Developed	1	3.3	0	0.0	1	2.4
Undeveloped	1	3.3	0	0.0	1	0
Total	30	100.00	11	100.0	41	100.0

This table shows that the majority of the facilities at both Benha and Kafr shoker districts are RHU. There are neither IRHU nor MCH centers at Kafr Shoker district. Also it shows that the majority of the studied facilities are developed ones.

Table (2): Distribution of the Q.I. grades of the general resources of developed and undeveloped facilities providing maternal health care services.

General Res. / Q.I grade / Facilities	*Poor		*Fair and Good		Total	
	No	%	No	%	No	%
Developed	5	19.23	21	80.77	26	100.0
Undeveloped	11	73.33	4	26.67	15	100.0
Total	**16**	**39.02**	**25**	**60.98**	**41**	**100**

$X^2 = 9.5$ $P < 0.001$

* Poor → < 60

*Fair and good → 60 +

Table (2) shows that the majority (80.77%) of the developed facilities in Qalyobia governorate have fair and good Q.I grade of general resources while the majority (73.33%) of the undeveloped facilities have poor Q.I. grade. The differences are statistically significant ($P < 0.001$).

Table (3): Distribution of the Q.I. grades of the unit administration of developed and undeveloped P.H.C. facilities providing maternal health care services.

Unit administrat. / Q.I grade / Facilities	Poor		Fair and Good		Total	
	No	%	No	%	No	%
Developed	23	88.46	3	11.54	26	100.0
Undeveloped	15	100	0	0	15	100.0
Total	**38**	**92.68**	**3**	**7.32**	**41**	**100**

Adjusted X^2 = 0.56 $P > 0.05$

Table (3) shows that 88.46% of the developed facilities in Qalyobia governorate have poor quality index grade of unit administration while 100% of the undeveloped facilities have poor Q.I. grade. The difference is statistically non-significant ($P > 0.05$).

Table (4): Distribution of the Q.I. grades of the lab. services of developed and undeveloped P.H.C. facilities providing maternal health care services.

Lab. services / Q.I grade / Facilities	Poor		Fair and Good		Total	
	No	%	No	%	No	%
Developed	23	88.46	3	11.54	26	100.0
Undeveloped	15	100	0	0	15	100.0
Total	**38**	**92.68**	**3**	**7.32**	**41**	**100**

Adjusted $X^2 = 0.56$ $P > 0.05$

Table (4) shows that the majority (88.46%) of the developed facilities provide lab. services of poor quality index grade while 100% of the undeveloped facilities provide poor Q.I. grade lab services. The difference is statistically in-significant ($P > 0.05$).

Table (6): Mean percentages of the quality indices values of the general resources, unit administration, lab services and antenatal and postnatal services of the developed and undeveloped P.H.C. facilities at Benha and Kafr shoker districts.

Q.I. values / Facilities	General Resources	Unit administration	Lab. services	Antenatal and postnatal services
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Benha developed facilities (17)	66.02 ± 8.9	44.9 ± 13.1	54.7 ± 5.1	31.96 + 10.1
Kafr Shoker developed f.(9)	66.8 ± 9.97	45 ± 7.99	52.9 ± 5.6	36.7 ± 6.8
t	- 0.197	- 0.02	0.80	- 1.42
P	P > 0.05	P > 0.05	P > 0.05	P > 0.05
Benha undeveloped facilities (13)	50.1 ± 10.9	38.8 ± 7.1	46.2 ± 7.1	29.3 ± 3.8
Kafr Shoker undeveloped f.(2)	45.5 ± 24.7	38.7 ± 3.3	40.5 ± 3.8	28.3 ± 0
t	0.28	0.03	1.71	2.06
P	P > 0.05	P > 0.05	P > 0.05	P > 0.05
Benha developed facilities (17)	66.02 ± 8.9	44.9 ± 13.1	54.7 ± 5.1	31.96 ± 10.1
Benha undeveloped facilities (13)	50.4 ± 10.9	38.8 ± 7.1	46.2 ± 7.1	29.3 ± 3.8
t	4.20	1.63	3.66	0.997
P	P < 0.05	P > 0.05	P < 0.05	P > 0.05
Kafr shoker Developed f. (9)	66.8 ± 9.97	45 ± 7.99	52.9 ± 5.6	36.7 ± 6.8
Kafr shoker undeveloped f. (2)	42.5 ± 24.7	38.7 ± 3.3	40.5 ± 3.8	28.3 ± 0
t	1.37	1.78	3.79	3.70
P	P > 0.05	P > 0.05	P < 0.05	P < 0.05

Table (6) shows that there are statistically significant differences between the mean percentages values of the Q.I. of the general resources and lab. services of the developed and undeveloped P.H.C. facilities at Benha district. Also, the values of the Q.I of the lab. services and antenatal and postnatal services of the developed and undeveloped P.H.C. facilities at kafr Shoker district ($p < 0.05$). on the other hand there are no statistically significant differences regarding the QI values between the developed facilities at Benha and Kafr Shoker and between the undeveloped facilities at both districts ($P > 0.05$).

Table (7): Mean percentages of the compliance with the criteria of the antenatal and post natal services of the developed and undeveloped P.H.C facilities.

Facilities / Criteria	Developed n = 26 $\bar{X} \pm SD$	Undeveloped n= 15 $\bar{X} \pm SD$	t	P
Special resources				
- Equipments	82.05 ± 16.94	68.89±8.61	3.29	P < 0.05
- Materials	35.58±21.42	21.67±12.91	2.59	P < 0.05
Service provision				
- Nursing care for newly registered pregnants	22.22±9.94	21.48±6.59	0.29	P > 0.05
- Medical care for the newly registered pregnants	29.49±15.62	22.22±8.13	1.96	P > 0.05
Periodically visits for pregnants	43.27±14.24	40±8.45	0.92	P > 0.05
- Post natal care	25±0	25±0	-	-
- Health education	17.95±16.94	2.22±8.61	3.94	P < 0.05
- Recording and reporting	37.18±17.19	31.11±8.61	1.5	P > 0.05
- DAYAS program	25± 0	25±0	-	-
Service outcome				
- Service provision indicators	36.15±16.02	37.33±14.86	0.23	P > 0.05

Table (7) shows that the developed facilities achieve a higher compliance percentages with the criteria of all the items than the undeveloped except at the service provision indicators. The difference is statistically significant ($P < 0.05$) regarding the equipments, materials (special resources) and the health education (process). Both developed and undeveloped facilities achieve the same compliance percentage with the criteria of post natal care and DAYAS program (25 ± 0).

Table (8): Mean Percentages of the compliance with the different criteria of the antenatal and post natal services provided by the developed facilities at Benha and Kafr Shoker districts.

Criteria \ District	Benha developed f. n =17	Kafr shoker developed f. n = 9	t	p
	$\bar{X} \pm SD$	$\bar{X} \pm SD$		
Special resources -Equipments	86.28 ± 16.9	74.08 ± 14.7	1.91	> 0.05
-Materials	32.35 ± 21.22	41.67 ± 21.65	- 1.05	> 0.05
Service provision -Nursing Care for newly registered pregnants	19.6 ± 10.78	27.16 ± 5.86	- 2.45	< 0.05
-Medical care for the newly registered pregnants	27.45 ± 16.6	42.59 ± 23.73	- 1.71	> 0.05
-Periodically visits for pregnants.	42.65 ± 15.35	44.44 ± 12.67	- 0.32	> 0.05
-Post natal care	25 ± 0	25 ± 0	-	-
-Health education	15.68 ± 17.15	22.22 ± 16.67	- 0.94	> 0.05
-Recording and reporting	35.29 ± 18.52	37.5 ± 11.79	- 0.37	> 0.05
-DAYAS program	25 ± 0	25 ± 0	-	-
Service outcome - Service provision indicators	31.76 ± 14.25	44.44 ± 16.67	- 1.94	> 0.05

This table shows that the developed facilities at Kafr Shoker district achieve a higher compliance percentage (with the criteria of all items except at the equipments) than Benha developed facilities. The difference is statistically significant ($P < 0.05$) only for the nursing care of the newly registered pregnants. Also this table shows that Benha and kafr Shoker developed facilities achieve the same compliance percentages with the criteria of postnatal care and that of DAYAS' program (25 ± 0).

Table (9): Mean Percentages of the compliance with the different criteria of the antenatal and post natal services provided by the undeveloped facilities at Banha and Kafr Shoker districts.

Criteria \ District	Banha Undeveloped f. n = 13	Kafr Shoker undeveloped f. n = 2	t	p
	$\overline{X}$ ± SD	$\overline{X}$ ± SD		
Special resources				
-Equipments	69.23 ± 9.2	66.67 ± 0	1	> 0.05
-Materials	21.15 ± 13.87	25 ± 0	-1	> 0.05
Service provision				
-Nursing Care for newly registered pregnants	21.37 ± 7.11	22.2 ± 0	- 0.4	> 0.05
-Medical care for the newly registered pregnants	26.92 ± 14. 49	16.67 ± 0	2.55	< 0.05
-Periodically visits for pregnants.	41.35 ± 7.88	31.25 ± 8.84	1.53	> 0.05
-Post natal care	25 ± 0	25 ± 0	-	-
-Health education	0 ± 0	16.67 ± 23.57	- 1	> 0.05
-Recording and reporting	30 .77 ± 9.24	33.33 ± 0	- 1	> 0.05
-DAYAS program	25 ± 0	25 ± 0	-	-
Service outcome				
- Service provision indicators	36.92 ± 13.78	40 ± 28.28	- 0.2	> 0.05

This table shows that there is no statistically significant difference (P > 0.05) between the undeveloped facilities in both Benha and Kafr Shoker districts regarding compliance with the criteria of the antenatal and post natal services except for medical care for the newly registered pregnants (P < 0.05).

Also this table reveals that both Benha and Kafr shoker undeveloped facilities achieve the same compliance percentage with the criteria of postnatal care and DAYAS' program (25 ± 0).

Table (10) : Mean Percentages of the compliance with the different criteria of the antenatal and post natal services provided by the developed and undeveloped facilities at Benha district.

Benha District / Criteria	developed facilities n =17	undeveloped facilities n = 13	t	p
	$\bar{X} \pm SD$	$\bar{X} \pm SD$		
Special resources				
-Equipments	86.28 ± 16.9	69.23 ± 9.2	3.53	< 0.05
-Materials	32.35 ± 21.22	21.15 ± 13.87	1.74	> 0.05
Service provision -Nursing Care for newly registered pregnants	19.6 ± 10.78	21.37 ± 7.11	- 0.54	> 0.05
-Medical care for the newly registered pregnants	27.45 ± 16.6	26.92 ± 14.49	0.09	> 0.05
-Periodically visits for pregnants	42.65 ± 15.35	41.35 ± 7.88	0.30	> 0.05
-Post natal care	25 ± 0	25 ± 0	-	-
-Health education	15.68 ± 17.15	0 ± 0	3.77	< 0.05
-Recording and reporting	35.29 ± 18.52	30.77 ± 9.24	0.87	> 0.05
-DAYAS program	25 ± 0	25 ± 0	-	-
Service outcome - Service provision indicators	31.76 ± 14.25	36.92 ± 13.78	- 1	> 0.05

This table shows that Benha developed facilities achieve a higher compliance percentage with the criteria of all items than Benha undeveloped facilities except for the nursing care for the newly registered pregnants and the service provision indicators. The difference is statistically significant ($P < 0.05$) only for the equipments and health education.

Also it shows that both Benha developed and undeveloped facilities achieve the same compliance percentage with the criteria of postnatal care and DAYAS' program (25 ± 0).

Table (11) : Mean Percentage of the compliance with the different criteria of the antenatal and post natal services provided by the developed and undeveloped facilities at Kafr Shoker district.

Kafr Shoker District / Criteria	Developed facilities n =9 $\overline{X} \pm SD$	Undeveloped facilities n = 2 $\overline{X} \pm SD$	t	p
Special resources				
-Equipments	74.08 ± 14.7	66.67 ± 0	1.512	> 0.05
-Materials	41.67 ± 21.65	25 ± 0	2.774	< 0.05
Service provision				
-Nursing Care for newly registered pregnants	27.16 ± 5.86	22.22 ± 0	2.529	< 0.05
-Medical care for the newly registered pregnants	42.59 ± 23.73	16.67 ± 0	3.277	< 0.05
-Periodically visits for pregnants	44.44 ± 12.67	31.25 ± 8.84	1.748	> 0.05
-Post natal care	25 ± 0	25 ± 0	-	-
-Health education	22.22 ± 16.67	16.67 ± 23.57	0.316	> 0.05
-Recording and reporting	37. 5 ± 11.79	33.33 ± 0	1.061	> 0.05
-DAYAS program	25 ± 0	25 ± 0	-	-
Service outcome				
- Service provision indicators	44.44 ± 16.67	40 ± 28.28	0.214	> 0.05

This table shows that Kafr shoker developed facilities achieve a higher percentage of the compliance with the criteria of all items than undeveloped ones. There is a statistically significant difference ($P < 0.05$) between them regarding the compliance percentage with the criteria of materials, nursing care for the newly registered pregnants and medical care for the newly registered pregnants. Also it shows that kafr Shoker developed and undeveloped facilities show the same compliance percentage with the criteria of postnatal care and DAYAS' program (25 ± 0).

Table (12): Mean percentages of the non-compliance with the criteria of the components of general resources of the PHC facilities.

Facilities / Resources Components	Developed (26) $\bar{X} \pm$ S D	Undeveloped (15) $\bar{X} \pm$ SD	t	P
Design	35.27±29.99	61.1±18.54	- 0.449	P > 0.05
Furniture	24.27±14.96	44.41±29.45	- 2.471	P < 0.05
Equipments	32.54±14.94	32.72±14.72	- 0.0375	P > 0.05
Materials	67.95±39.42	97.78±8.59	- 0.461	P > 0.05

Table (12) shows that there are higher mean percentages of the non compliance of the undeveloped facilities with the criteria of the design, the furniture, the equipments and the materials than those of the developed facilities but the differences are statistically non significant ($P > 0.05$) except for the furniture where the differences are statistically significant ($P < 0.05$).

Table (14): Mean percentages of the non-compliance with the criteria of the unit administration of the developed and undeveloped PHC facilities.

Facilities / Unit administ. Components	Developed (26)	Undeveloped (15)	t	P
	$\overline{X} \pm$ S D	$\overline{X} \pm$ SD		
Manpower administration	85.58±21.42	91.67±15.43	-1.052	P > 0.05
Unit environment & appearance	64.13±18.68	66.69±16.67	-0.476	P > 0.05
Storage and maintenance procedures	45.19±14.18	48.8±16.26	-0.717	P > 0.05
Health information system	39.23±3.9	42.67±7.04	1.744	P > 0.05
Clients satisfaction	49.99±17.01	56.68±8.47	1.677	P > 0.05

Table (14) shows that although the undeveloped PHC facilities exhibit higher non compliance percentages with the criteria of all the components of the unit administration than the developed facilities yet the differences are statistically in significant (P > 0.05).

Table (15): Mean percentages of the non – compliance with the criteria of the unit administration of the developed and undeveloped PHC facilities at Benha and Kafr Shoker districts.

Components of unit admin. / Facilities	Man power administration	Unit appear. & environment	Storage & maint. Proc.	Information system	Client satisf-action
	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$
Benha developed f. (17)	82.4 ± 22.99	64.7 ± 21.96	45.6 ± 15.9	38.8 ± 4.9	51.9 ± 19.4
Kafr Shoker developed facilities (9)	91.7 ± 17.7	62.99 ± 11.1	44.4 ± 11	40 ± 0	46.6 ± 11.1
t	- 1.15	0.26	0.23	- 1.01	0.94
P	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05
Benha undeveloped facilities (13)	90.4 ± 16.3	71.8 ± 18.5	51.9 ± 12.3	43.1 ± 7.5	57.7 ± 8.7
Kafr Shoker undeveloped f. (2)	100 ± 0	66.7 ± 0	62.5 ± 17.7	40 ± 0	50 ±0
t	- 2.12	0.99	- 0.812	1.49	3.199
P	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P < 0.05
Benha developed f. (17)	82.4 ± 22.99	64.7 ± 21.96	45.6 ± 15.9	38.8 ± 4.9	51.9 ± 19.4
Benha undeveloped f. (13)	90.4 ± 16.3	71.8 ± 18.5	51.9 ± 12.3	43.1 ± 7.5	57.7 ± 8.7
t	- 1.37	- 0.96	-1.22	- 1.79	- 1.11
P	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05
Kafr Shoker developed facilities (9)	91.7 ± 17.7	62.99 ± 11.1	44.4 ± 11	40 ± 0	46.6 ± 11.1
Kafr Shoker undeveloped f. (2)	100 ± 0	66.7 ± 0	62.5 ± 17.7	40 ± 0	50 ± 0
t	- 1.40	- 1.00	- 1.39	0	-1
P	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05

Table (15) shows that there are no statistically significant differences (P > 0.05) between Benha and Kafr Shoker facilities for the non compliance percentages with the criteria of all the components of the unit administration. The difference is statistically significant (p < 0.05) only for the client satisfaction between Benha and Kafr Shoker undeveloped facilities.

Table (16): Mean percentages of the non-compliance with the criteria of the lab services of developed and undeveloped PHC facilities.

Facilities / Service component	Developed (26)	Undeveloped (15)	t	P
	$\overline{X}$ ± S D	$\overline{X}$ ± SD		
Special resources	26.72±7.79	37.6±11.44	-3.271	P < 0.05
Process	74.62±5.08	80±0	-5.402	P < 0.05
Outcome	83.85±13.88	81.33±5.16	0.831	P > 0.05

The undeveloped facilities show higher mean percentages regarding the non compliance with the criteria of the special resources and process (37.6 ± 11.44 and 80 ± 0 respectively) of the lab services than the developed facilities (26.72 ± 7.79 and 74.62 ± 5.08 respectively). The differences are statistically significant (P< 0.05). Although the developed facilities show higher non compliance mean percentages in the out come (83.85 ± 13.88) than the undeveloped facilities (81.33 ± 5.16) yet the difference is statistically non significant (P > 0.05).

Table (17): Mean percentages of the non compliance with the criteria of the lab. services provided by the developed and undeveloped PHC facilities at Benha and Kafr Shoker districts.

Lab. services components / Facilities	Special Resources $\bar{X} \pm SD$	Process $\bar{X} \pm SD$	Outcome $\bar{X} \pm SD$
Benha developed facilities (17)	26.9 ± 7.5	75.3 ± 5.1	81.2 ± 14.95
Kafr shoker developed facilities (9)	26.3 ± 8.7	73.3 ± 4.9	88.9 ± 10.5
t	0.18	0.98	- 1.53
P	P > 0.05	P> 0.05	P > 0.05
Benha undeveloped facilities (13)	36.4 ± 11.7	80 ± 0	81.5 ± 5.5
Kafr shoker undeveloped facilities (2)	45.5 ± 6.4	80 ± 0	80 ± 0
t	- 1.63	0	0.98
P	P > 0.05	P> 0.05	P > 0.05
Benha developed facilities (17)	26.9 ± 7.5	75.3 ± 5.1	81.2 ± 14.95
Benha undeveloped facilities (13)	36.4 ± 11.7	80 ± 0	81.5 ± 5.5
t	- 2.54	- 3.8	- 0.08
P	P < 0.05	P < 0.05	P > 0.05
Kafr shoker developed facilities (9)	26.3 ± 8.7	73.3 ± 4.9	88.9 ± 10.5
Kafr Shoker undeveloped facilities (2)	45.5 ± 6.4	80 ± 0	80 ± 0
t	- 3.57	- 4.1	2.54
P	P < 0.05	P < 0.05	P < 0.05

Table (17) shows that there are statistically significant differences (P< 0.05) between the developed and the undeveloped P.H.C. facilities at Kafr Shoker district regarding the mean of the non compliance percentage with the criteria of the special resources, process and outcome of the lab. Services. Also, it shows that the mean percentages of non compliance with the criteria of lab services regarding special resources and process are higher in undeveloped facilities (36.4 ±11.7, 80.0 ± 0 respectively) than that among developed ones (26.9 ± 7.5, 75.3 ± 5.1 respectively) at Benha district. Differences are statistically significant (P < 0.05).

Table (18): Mean percentages of the non-compliance with the criteria of the antenatal and postnatal services provided by the developed and undeveloped PHC facilities.

Facilities / Service components	Developed (26)	Undeveloped (15)	t	P
	$\bar{X} \pm$ S D	$\bar{X} \pm$ SD		
Special resources	44.51±15.27	58.06±10.04	-3.422	P < 0.05
Process	70.73±7.07	74.62±4.19	-2.21	P < 0.05
Outcome	63.85±16.02	62.67±14.86	0.238	P > 0.05

This table shows that undeveloped PHC facilities show statistically higher significant differences for the non compliance percentages with the criteria of the special resources and process components of the antenatal and postnatal care (58.06 ± 10.04 and 74.62 ± 4.19) respectively than the developed facilities (44.51 ± 15.27 and 70.73 ± 7.07 respectively ($P < 0.05$).

Table (19): Mean percentages of the non compliance with the criteria of the ante-natal and post-natal health services provided by the developed and undeveloped PHC facilities at Benha and Kafr shoker districts.

Ante.& post natal h.s. Components / Facilities	Special resources $\overline{X} \pm SD$	Process $\overline{X} \pm SD$	Outcome $\overline{X} \pm SD$
Benha developed facilities (17)	44.5 ± 17.4	72.2 ± 7.5	68.2 ± 14.2
Kafr Shoker developed f. (9)	44.5 ± 11.1	68 ± 5.7	55.6 ±16.7
t	-	1.6	1.92
P	-	P > 0.05	P > 0.05
Benha undeveloped facilities (13)	58.2 ± 10.8	74.5 ± 14.4	63.1 ± 13.8
Kafr shoker undeveloped f. (2)	57.1 ± 0	67.8 ± 18.8	60 ± 28.3
t	0.37	0.48	0.15
P	P > 0.05	P > 0.05	P > 0.05
Benha developed facilities (17)	44.5 ± 17.4	72.2 ±7.5	68.2 ± 14.2
Benha undeveloped facilities (13)	58.2 ± 10.8	74.5 ± 4.4	63.1 ± 13.8
t	- 2.65	- 1.05	0.99
P	P < 0.05	P > 0.05	P > 0.05
Kafr Shoker developed f. (9)	44.5 ±1.1	68 ±5.7	55.6 ±16.7
Kafr Shoker undeveloped f. (2)	57.1 ± 0	67.8 ± 18.8	60 ± 28.3
t	- 3.41	0.01	- 0.21
P	P < 0.05	P > 0.05	P > 0.05

Table (19) Denotes that the undeveloped facilities at Benha and Kafr Shoker districts show higher mean percentages for the non compliance with the criteria of the special resources of the ante natal and postnatal services (58.2 ± 10.8 and 57.1 ± 0 respectively) than those of developed facilities at both districts (44.5 ± 17.4 and 44.5 ± 1.1 respectively). The differences are statistically significant (P < 0.05).

Part II

Findings raised from fulfillment of the second part of the checklist concerned with problem description (criteria based) and possible problem causes facing PHC facilities providing maternal health services achieved by; FGD, direct observation and samples of medical records and documents.

- Description of obstacles and their possible causes (based on criteria) of the components of :

I- General resources

II- Unit administration

III- Lab. Services

IV- Infection control

V- Referral services

VI- Antenatal and post natal care services

VII- Natal services

I- Problems and possible causes of the general resources in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
Design: **1-Service provision rooms' design** **1-1 Reception site**	At temporary flates (undeveloped) facilities: - The reception site is not easy to be identified on entering into the facility. - Absence of a covered good aerated and illuminated place for the clients.	- The temporary flats are not constructed to be a health facility.
1-2 Service provision rooms	• The facilities at temporary flats lack all the standards. • In the other facilities: - There was no adequate illumination neither natural nor artificial. - The arrangements of the furniture and equipments don't allow easy movement and service provision.	• Temporary flats lack the sanitary standards recommended for the health service provision rooms. • In the other facilities: - Narrow rooms spaces. - Crowded furniture. - Weak artificial illumination - High number of nurses and clerks beyond the actual need of the facility.
1- 3 Sterilization room	- At all the developed and undeveloped health facilities a separate sterilization room is available.	

Criterion no	Problem description	Problem causes
1-4 Service provision rooms' cleanliness	Some of the facilities complain of presence of either dust, trash, fissures on the floors, roofs, walls, doors, windows, furniture, equipments and illumination devices.	- The presence of dust in the surrounding environment. - The old buildings is full of fissures. - Some of the new buildings, complain of unperfected building process. - Deficient number of the cleaning workers. - Reluctance about cleanliness and protective maintenance at all levels. - Lack of cleaning tools.
1- 5 Waiting place.	- There is no adequate spaced covered waiting place with sufficient illumination and ventilation - There are no sufficient chairs for the clients at crowded days.	- The construction of some facilities lack some standards. - In adequate chairs. - Crowdness of the clients.
1- 6 Toilets	At all facilities: - The toilets are dirty with no soap. - Their number is in adequate with poorly maintained appliances.	- The bad habits of the clients - Frequent dysfunction of the sanitary appliances due to imperfect construction. - Inadequate number of the cleaning workers.

Criterion no	Problem description	Problem causes
Furniture **2-Service provision room's furniture** **2-1 Chairs and desks**	- Inadequate number of chairs or desks - Poorly maintained furniture.	- The unbalance between the number of nurses and clerks and the number of chairs. - Inadequate supply from the district level.
2-2 Examination bed (table) and immunization table	At temporary flates: - The tables are badly maintained. - There was no examination bed at each clinic within the facility but only one examination bed serving all clinics.	- The amount of furniture have been reduced to cope with the narrow spaced temporary flats.
2-3 Metal or wooden cover (Baravan)	At some undeveloped facilities the cover is not available in some rooms where the clients are medically examined .	- The amount of furniture have been reduced to cope with the narrow spaced temporary flats.
2-4 Cupboard to keep materials and records	- All the facilities satisfy this criterion	

Criterion no	Problem description	Problem causes
2-5 Waste basket	- In adequate number of waste baskets (at least one at each room) - There is no a disposal plastic bag inside the basket.	- Shortage in the supply of baskets from the district level specially for the undeveloped facilities. - Reluctance to provide the basket with a plastic bag.
3-Labour room (section) furniture: Only some facilities have labour room. **3-1 Beds and side cupboards (before labour room)**	- At the R.H.U. and the C.R.H.U. there is no before labour room, - At the I.R.H. U. there is no side cupboard. - The furniture are dirty and badly maintained.	- Low rate of labour at the rural facilities.
3-2 Movable chair	This criterion is satisfied with at all the facilities providing natal care	
3-3 Labour table and stools	The furniture are dirty	Low rate of labour
3-4 Instrument's cupboard	The cupboard is dirty	Low rate of labour
3–5 instruments' table and plate.	The instruments table and plate is dirty	Low rate of labour
3-6 side lamp	The side lamp is dirty	Low rate of labour

Criterion no	Problem description	Problem causes
3-7 beds and side cupboards (After labour room furniture)	- The rural units have no after labour room. - There are no side cupboards and the furniture are dirty in the IRHU.	Low rate of labour
3-8 cloths cupboards	- The rural units have no after labour room. - At the IRHU there is no cloths' cupboard .	Low rate of labour
4) Essential Equipments for service provision **4-1 Stethoscopes**	- Inadequate number of the stethoscopes. - The ear pieces and cones are defected. - The stethoscopes are not suitable to be used.	- Tedious procedures at the district level to maintain any instrumental defect. - Bad quality of the stethoscopes . - Misuse.
4-2 Sphygmomanometer	- Inadequate number - The sphygmomanometer are unsuitable to be used.	
4-3 Thermometer	Available at all the facilities	
4-4 Adult weight scale with height scale	- The adult weight scale is not accompanied with adult height scale. - The scale is unsuitable for work.	- Tedious procedures at the district level to maintain any instrumental defect. - Bad quality of the stethoscopes . - Misuse by the health services providers

Criterion no	Problem description	Problem causes
4-5 children weight scale with height scale.	All the facilities posses this criterion.	
4-6 Labour room equipments	At all facilities: - There is no septic solution in the carrier with two kidney shaped plates. - The equipments are dirty.	Low rate of labour
4- 7 Simple lab at labour section. **4-8 Forceps.**	All the facilities posses these criteria	
4-9 Sterilization equipments	At all facilities there is no septic solution for hands disinfection before and after any medical examination at the carrier with two kidney shaped plates.	-The high flow rate in the out patient clinics. - Reluctance of the physicians.
5- Essential materials for service provision **5-1 Medical materials**	Except some developed facilities, all facilities have inadequate number of syringes and gloves for at least 2 months according to the work flow.	- Shortage in the supply of these materials from the district level.
5-2 Lab materials at labour room	Available at all facilities	
5-3 Cleaning materials	Except some developed facilities there is no adequate amount of septic solutions, soap, cleaning tools for at least 2 months according to the work flow at all facilities.	- Shortage in the supply of these materials from the district level.

II- Problems and possible causes of the unit administration in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
1- Man power administration **1-1 Trained human resources**	At all facilities the human resources are inadequate (type, number).	- The distribution of the human resources among the different facilities is the responsibility of the district level. .
1-2 Job Description	At all facilities no one has neither a copy nor a hanged table at the service rooms about his job description.	On first contact with any job, the personnel acquire an idea about his duties from others not from the documented job description rules.
1-3 Work regulation	At some facilities: - The service rooms are not planned so as to allow easy flow of the clients. - The responsibilities are not distributed on the service providers according to their abilities and their specialties. - The work time is not planned so as to allow all the service providers to work and so the client's waiting time is long.	- Overcrowdness, - Absence of a skilled leader - The passive attitude towards the services. provision - The bad work conditions.
1-4 Team work spirit	At some facilities there is no a monthly periodic meetings to discuss the performance level of the team, work problems or future activities	

Criterion no	Problem description	Problem causes
2- Unit Environment and appearance **2-1 General appearance of the unit**	Except few developed facilities; - The external appearance of the buildings is not maintained. - The surrounding area of the facilities is not clean. - The service providers' clothes are not clean and some of them don't wear a clean white coat.	- Reluctance of the district level to maintain any defects. - Reluctance of the health services providers.
2-2 Sewage disposale appliances	-The presence of open sewage disposable openings in the ground. - The presence of water leakage on the floors, walls or roofs.	- Old badly maintained constructions of some undeveloped facilities. - Unperfected new constructions of some developed facilities.
2-3 Waste disposale	At almost all facilities all the standards of collection, categorization and getting rid of the wastes, are not satisfied.	- Reluctance of the health service providers and workers. - Absence of strict supervision on these processes by the physician or the supervision team.

Criterion no	Problem description	Problem causes
3- Storage and maintenance procedures **3-1 Work materials; asking and receiving procedures**	All the facilities satisfy all the standards	
2-3 Estimation of the actual needs of the materials	At all facilities: - The asked amount is not suitable for the actual need. - There is no drug reserve except for IMCI drugs.	The received amount of drugs coincide with the available amount at the district level not with the asked amount.
3-3 Unit security	At some facilities; - There are several bare electrical appliances. - There is no metal bares as a security measure on the room windows.	-Old badly maintained constructions of some undeveloped facilities. -Unperfected new constructions of some developed facilities.
3-4 Protective maintenance	Except some developed facilities; the health service providers are unable to explain the schedule needed to maintain the buildings, the furniture and the equipments.	Dealing with the different infrastructures passes routinely without following any schedule.
4- Information system **4-1 Supervision team recommendations** (supervision record)	This criterion is satisfied by all facilities	

Criterion no	Problem description	Problem causes
4-2 Availability of the health cards	Some facilities have no printed health cards for the pregnants at the antenatal care clinics.	Inadequate supply by the district level.
4-3 Treatment cards	the diagnosis and the vital signs data is not accurately and not fully registered at all facilities.	No instructions from higher levels to completely full fill these data.
4-4 Files extraction	At all facilities, the health service providers are able to extract the files according to names and numbers.	
4-5 data utilization	At almost all facilities the data which is collected is not used:	Data collection is performed only to send them to higher levels at the end of every month as instructed by the district level.
5- Clients' satisfaction **5- 1 Welcoming**	The interview with the health team lack warmness at some facilities	- The bad attitude of the health team towards work and clients. - poor interpersonal communication.
5- 2 Waiting place	At some facilities there is no specialized waiting room. At others it is not comfortable.	- The construction of some facilities lack some standards. - Inadequate chairs. - Crowdness of the clients

Criterion no	Problem description	Problem causes
5-3 Waiting time	The clients complain of a prolonged waiting time at some facilities:	- high flow rate of the clients. - The physicians may start working so late . - Inadequate number of working physicians - bad organization of the working time.
5-4 The given information	All almost all facilities the clients complain that: - No one explain to them what is the next step. -They can not benefit from the health team advices given to them	-Over corwdness reported at some facilities. -Bad attitude of some health service providers. - Unplanned working conditions. - Poor interpersonal communication skills.
5-5 Service providers clients interaction	At all facilities the clients complain that: - They are not given a chance to ask their questions - They can not benefit from the answers of the health team.	
5-6 Cost	This criterion was complied with at all facilities.	

III- Problems and possible causes of the lab. services in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
Special resources **1- Designs** **1-1 Lab. rooms.**	• The temporary place lack all the standards • In some undeveloped facilities: the floors and the walls are not covered with ceramic tiles and there are no net on the windows • In some developed units : - The room space is not adequate. - The facilities with a 2nd level lab have no specialized room for that lab. - Inadequate natural lights (illuminations). - Inadequate natural ventilation there with no exhaust fan.	The basic construction of the different facilities is responsible for the observed non compliance. It didn't respect the recommended standards for the lab. rooms
1-2 Cleanliness	presence of dust, dirts and sometimes fissures on the floors, roofs, doors, windows, furniture and equipments.	- The presence of dust in the surrounding environment. - The old buildings are full of fissures. - Some of the new buildings, complain of unperfected building process. - Deficient number of cleaning workers. - Reluctance about cleanliness and protective maintenance at all levels. - Lack of cleaning tools.

Criterion no	Problem description	Problem causes
1- 3 Basins (tubs)	Many facilities lack one or more of the standards of that criterion others lack all the standards.	-The original construction don't respect the different standards. -Negligence of the frequent regular maintenance of the sanitary latrines in the facility. -Reluctance of the lab. technicians to follow up the sound hygienic measures
1-4 Toilets	At all facilities: - The toilets are dirty with no soap. - Their number is in adequate with poorly maintained appliances.	- The bad habits of the clients - To frequent dysfunction of the sanitary appliances due to imperfect construction. -Inadequate number of the cleaning workers. - weak supervision role of the physician.
2- Tropical lab furniture **2-1 Desks and chairs**	1- Inadequate chairs, no stools 2- Badly maintained furniture	- Inadequate supply from the district level - Presence of dust in the surroundings. - Deficient number of cleaning workers. -Reluctance about cleanliness and protective maintenance . - old furniture at undeveloped facilities.
2-2 Bench and shelf	- The Benches (Shelves) are full of fissures and scratches. - There are no shelves in the lab. room of the temporary flats.	-The temporary flats places lack some standards. - Reluctance about protective maintenance. - Old shelves at some undeveloped facilities

Criterion no	Problem description	Problem causes
2- 3 Waste basket (trash)	There is no plastic or metal waste basket in some facilities.	Reported defects in the furniture of the temporary places and some undeveloped facilities.
2-4 Cupboard to keep materials and registration records	The cupboard is dirty, full of dust and its contents was untidy.	- Reluctance of the lab. technicians about cleanliness. - Absence of strict supervision from higher levels. .
2-5 Burner	There is no burner at some facilities	The burner is not received with the other lab. equipments from the district level.
3- Tropical lab. equipments **3-1 Microscope**	There is only one microscope	Only one microscope is received from the district level.
3-2 Centrifuge **3-3 test tubes race** **3-4 Sahli apparatus**	All these criteria are satisfied with at all facilities	
4- Second level lab. equipments :	Only some facilities provide 2nd level lab services	

Criterion no	Problem description	Problem causes
4-1 Sedimentation rate apparatus. **4-2 RBCs & WBCs counting apparatus** **4-3 Urine specific gravity measurement apparatus.**	All these criteria are satisfied with at all facilities	
4-5 Electrical oven	There is no electrical oven at some facilities.	Haphazard distribution of the equipments among the facilities.
4-6 Refrigerator	There is no refrigerator at some facilities .	Haphazard distribution of the equipments among the facilities.
5- Materials needed for lab. **5-1 Urine analysis solutions (Kits)** **5-2 Stool analysis solutions (Kits)**	These 2 criteria are satisfied by all facilities	
5 – 3 Another lab kits	The following kits are not available; - Iodine tincture for bile pigments analysis . - Sulphur for bile salts analysis - 1/10 titric solutions for Hg analysis.	Deficient supply from the district level.

Criterion no	Problem description	Problem causes
5-4 Glass materials	Inadequate available supply of the glass slides for at least to 2 months when compared with the flow rate of the clients.	- The high flow rate reported at some facilities. - The high wastage rate of the glass slides (fractures, fissures …) - Deficient supply by the district level.
5-5 Disposable sample collection cups	inadequate disposable sample collection cups for at least 1 month when compared with its expenditure rate	- The high out patient clinics' rate. - Haphazard lab. analysis asked by some physicians without any need.
5-6 Lancet's disposable needles	The available disposable needles are inadequate for at least 2 months.	1- The high flow rate reported at some facilities. 2- The high wastage rate of the glass slides. Deficient supply by the district level.
5-7 Burner's fuel	There are complete absence of the burner's fuel or inadequate amount for at least 2 months	Deficient supply of the fuel by the district level
5- 8 second level lab kits	The available amount of the 2nd level lab kits is inadequate for at least 2 months.	- Deficient supply from the district level. - Reluctance of early asking the district level before any inadequacy.
5-9 Kato-Kats tools	The available amount of the malakite green tincture is inadequate for at least 2 months at some developed facilities.	

Criterion no	Problem description	Problem causes
5-10 Registration records All the facilities complain of non compliance with this criterion.	At all facilities : 1- Sehha/4 tropical records for + ve cases are not available. 2- Sehha/2, sehha/3 records are not available at some units	- Deficient supply of sehha/2 and seha/3 records from the district level. - No supply of sehha/4 tropical cards from the district level.
The process **6- The lab services provision.** **6-1 Urine analysis** **6-2 Stool analysis**	All facilities show compliance with these 2 criteria	
6-3 patient weight	At all facilities, the patient weight was not recorded at sehha/4 tropical card	The unavailability of sehha/4 tropical cards at all facilities.
6-4 Post treatment reexamination	At all the visited facilities. the patients are not reexamined after receiving anti Bilharzial drugs (for 3 months) or antiparasitic drugs (for 2 weeks).	- Absence of sehha/4 tropical cards needed for follow up of every patient - Reluctance of the patients
6-5 Safe procedures at the lab	At all facilities, the technicians are not following the safe procedures while working at the lab.	- Reluctance to follow these instructions - High clients flow rate. - Week supervision role by higher levels

Criterion no	Problem description	Problem causes
7- Health education **7-1 Wall stickers**	There are no stickers on the walls of the lab and the waiting room about the lifecycle of bilharzia or the different parasites	some facilities may lack the presence of a waiting place.
7-2 Clients' Health education	At all facilities there are no regular health education sessions .	- Work load. - Absence of the participative role of the physician. - Reluctance of the lab. technicians.
7-3 Positive cases counseling	All the facilities complain of absence of planned health education sessions for the positive case of (Bilharziasis and intestinal parasites)..	
8- Recording and reporting **8-1 Accuracy and completeness of the data in the files and the cards.**	At all health facilities: - Some health programs' printed files were not available. - The data registration are not completed.	- Deficient supply of the printed files by the district level. - No adequate time to fulfill data registration at all spaces of the files due to the work load and lack of training.
8-2 Periodic reports	At all facilities the health program activities are not demonstrated in the form of tables or graphs every 4 months.	These activities are not asked for by the district level.

Criterion no	Problem description	Problem causes
Outcome **9- Service performance indicators** **9-1 The percentage of the urine & stool analysis of the out patient clinics' clients.**	The percentage of the urine analysis of the out patient clinics' clients for the previous month was less then 50% and the percentage of the stool analysis was less than 30% of the total number of the out patient clinics' clients.	- The very high rate of the out patient clinics' clients. - Some health facilities complain of absence of the lab. technicians some days of the weak. They work at another facilities to overcome the shortage of the number of the lab. technicians on the district level.
9-2 Mass urine & stool analysis percentage.	The percentage of the mass urine and stool analysis for the previous month was less than 9% of the total population served by the facility .	- The work load (e.g. out patient clinics, school children lab. analysis) - Refusal of some people to cooperate with the lab. technicians.
9-3 Schools' students urine and stool analysis percentage.	At all facilities the percentage can not be calculated	No target number for the school children examined every month.
9-4 The percentage of reanalysis after treatment with antibilharzial drugs.	At all facilities The percentage can not be calculated	No available recorded data
9- 5 The percentage of reanalysis after treatment with drugs anti-parasitic.	At all facilities percentage can not be calculated	No available recorded data.

IV- Problems and possible cases of the infection control program in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
Special resources **1- Special resources for the infection control program**		
1-1 Medical materials	At some facilities there is inadequate number of syringes and gloves for at least 2 months according to the wok flow	Shortage in the supply of these materials from the district level
1-2 cleaning materials	At some facilities there is no adequate mount of anti septic solutions, soap, cleaning tools for at least 2 months according to the work flow.	Shortage in the supply of these materials from the district level.
1-3 Infection control procedures schedule	At all facilities there is a documented schedule to implement the infection control procedures with responsibility determination	
Process **2-General medical procedures**		
2-1 Hands washing	At all facilities, the health service providers don't follow strictly the standards concerned with hands washing.	- The high flow rate of the clients - Reluctance of some health service providers to follow these instructions as they are very tedious.
2-2 Medical and surgical gloves use	At all facilities no one use surgical gloves during changing upon; wounds, neonatal umbilicus, stitches or loop application.	- Inadequate number of the surgical gloves. - Some health service providers mention that the medical disposale gloves can be used instead of the surgical gloves at these situation.

Criterion no	Problem description	Problem causes
2-3 Thermometers' disinfection	All the mentioned precautions are not followed up at any facility.	No one stresses on following up these precautions either from higher levels or from the physician of the unit
2-4 Client's skin disinfection	At all the visited facilities. the client's skin are not disinfected before syringing, blood sampling, etc… .	- Reluctance of the health service providers. - The higher flow rate of the clients - The lack of adequate quantities of the disinfectants at some facilities.
2-5 Pre-surgical and syringing procedures	The health service providers at all the visited facilities don't wash their hands before syringing or before septic surgical procedures .	- Reluctance of the health service providers. - The higher flow rate of the clients - The lack of adequate quantities of the disinfectants at some facilities.
2-6 prevention of infection transmission among clients	All the standards concerned this criterion were not followed up at any health facility.	No one stresses on following up these precautions either from higher levels or from the physician of the unit.
3- Instruments disinfection and sterilization **3-1 septic instruments cleaning and disinfection**	These criteria are satisfied by all facilities	
3-2 The highly effective disinfection of the instruments		
3-3 instruments sterilization		
3-4 surgical gloves and cotton dressings sterilization		

Criterion no	Problem description	Problem causes
4-Environmental sanitation procedures **4-1 air pollution preventive measures**	The recommended standards mentioned to prevent air pollution within the facilities are not followed up at any facility.	- difficulty to control the dust in the rural areas. -"no smoking behavior" is difficult to be achieved
4-2 Rooms cleaning and disinfection	The recommended standards needed to clean and disinfect the facility rooms are not followed up to any facility.	- Inadequate number of cleaning workers - Inadequate cleaning medical materials. - Reluctance of the workers - Weak supervision role.
4-3 Collection of the facility wastes	Apart from the standards of collecting the sharp disposal wastes all the standards needed for sanitary collection of the facility wastes are not followed up by almost all facilities .	- Reluctance of the workers . - The supervisional visitors only stress on following the standards of the sharp disposal wastes. - Absence of the supervisional role of the facility physicians.
4-4 Sanitary disposal of the facility wastes.	- The standards concerned with this criterion are were not followed strictly at some facilities - The time factor is not respected at others.	
Out come		
5-Infection control outcome indicators **5-1 Health service providers infection percentage.** **5-2 occurrence of septic microbial contamination** **5-3 The percentage of failure to transport the wastes to the burner**	These parentages can not be calculated	No available data

V- Problems and possible causes of the referral system in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
Special resources **1- Special resources of the referral system** 1-1 Communication means 1-2 Transportation means to carry urgent cases to the hospital 1-3 recording files	These 3criteria are satisfied by all facilities	
Process **2- The facility referral service produces**		
2-1 Taking the right decision to refer cases	This criterion is satisfied with at all facilities	
2-2 Management of the urgent cases	The hospital to which the cases will be referred is not informed by telephone to prepare for receiving the referred cases	The supervision visitors don't stress upon following this standard
2-3 Recording and reporting	This criterion with all its standards can not be studied at any facility.	No available data about follow up
3- Urgent cases referral procedures' rates	These criteria can not be studied at any facility	No available data
3-1 The percentage of telephone calls from the facility to the hospital to inform it about the urgent cases.		
3-2 Urgent cases transportation percentage.		
3-3 urgent cases accompanying percentage		

Criterion no	Problem description	Problem causes
4- The facility referral rates **4-1 Pregnants' referral percentage** **4-2 Labour or abortive cases referral percentage**	These indicators can not be calculated for the previous months.	No available data
4-3 ARI cases referral percentage (< 5 years). **4-4 Diarrheal cases referral percentage (< 5 years).**	These 2 indicators are calculated and were send to higher levels by all facilities.	
4-5 out patient clinics' cases referral percentage. **4-6 Referred (after noon and night emergencies) cases percentage** **4-7 Referred T.B suspected cases percentage.** **4-8 Referred infectious diseases cases percentage.**	The 4 indicators from 4-5 up to 4-8 can not be calculated	No available reported data
Outcome **5- Clients satisfaction about referral services.** **5-1 welcoming.** **5-2 waiting time at the facility** **5-3 Interaction with the clients** **5-4 cost** **5-5 follow up**	All these criteria can not be studied at any facility.	The referred cases are not followed up neither before (nor After) referral.

Criterion no	Problem description	Problem causes
6- Referral service performance outcome indicators. 6-1 The percentage of coincidence between the primary and the terminal diagnosis 6-2 the follow up percentage of the previously referred cases 6-3 The feed back referral percentage	These indicators could not be calculated at all facilities	- no available data about feed back. - The hospital don't care about the referral - The case may not go to the hospital. - No follow up of the referred cases by the facility.

VI- Problems and possible causes of the antenatal and post natal services in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
Special Resources **1- Maternal care room equipments** **1-1 Fetal stetoscope** **1-2 Home visits bag with its contents**	These criteria are available at all the facilities	
1-3 Sonar	Except some developed facilities, all the facilities have no sonar.	The sonar is received with the other equipments from the district level.
2- Maternal care room materials **2-1 Lab. materials at the facilities that have not a lab.**	All the facilities have a lab. so this criterion can't be studied	
2-2 Essential drugs	All the facilities complain of: - Complete absence of the calcium tablets. - The available amount of the other drugs is not sufficient for at least 2 months according to the expenditure rate of the facility.	- Deficient supply of these drugs by the district level. - The haphazard drug prescription by the physician.
2-3 Gloves	Except some developed facilities; the amount of the gloves are insufficient for at least 2 months according to the monthly expenditure rate by the facility .	Deficient supply of the gloves by the district level.

Criterion no	Problem description	Problem causes
2-4 Another pharmaceutical materials	Except some developed facilities: the amount are insufficient for at least 2 months according to the monthly expenditure rate by the facility.	Deficient supply by the district level
2-5 Registration records	- The records are not sufficient for at least 3 months according to the work flow at the facility. - At some facilities they are dirty and not in a well maintained state.	-Deficient supply of these records by the district level. - The high flow rate of clients at some facilities
Process **3-Nursing care of the newly registered pregnants** **3-1 Clients' interview**	All the standards cannot be satisfied by almost all facilities.	- The high clients flow rate and the bad clients behavior. - The bad attitude of towards the clients and service provision. - Weak interpersonal communication

Criterion no	Problem description	Problem causes
3-2 Present history. **3-3 Past history** **3-4 Family history**	Some required items of the history are not satisfied by all facilities	The maternal health cards don't contain some of the data mentioned in the standardized check list.
3-5 Anthropometric measurement	At all facilities, the newly registered pregrants are weighted and their heights have been measured during their first visit.	
3-6 Vital sings measurement	At some facilities the vital signs are not measured during the first visit of the newly registered pregnants.	- Syphmomanometers are badly maintained at some facilities. - The high pregnants flow rate. - Reluctance of the health service providers. - Overcrowdness
3- 7 Abdominal examination	At all facilities. there is no abdominal examination with determination of the fetal presentation or calculation of the fundal level of the newly registered pregnants.	- The Abd. examination is a higher skill. - The health service providers don't receive any training courses. - Refusal of some pregnants to be examined by non efficient not highly graduated personnel..

Criterion no	Problem description	Problem causes
3-8 Limbs examination	The upper and the lower limbs of the newly registered pregnants are examined for the oedema, varices, thrombosis at only limited number of developed facilities.	- Reluctance of the health service providers. - Overcrowdness
3– 9 Laboratory diagnostic tests	At all facilities the different required laboratory tests are not performed completely.	- Some lab. tests mentioned at the manual may not be available and they are not free so not regularly done. - Overcrowd ness. - Un planned work conditions.
4- Clinical care of the newly registered pregnants **4-1 Revision of the pregnants cards** **4-2 General clinical examination** **4-4 systemic clinical examination**	- At some facilities the physicians only revise the pregnant cards without any examination. - At others they don't satisfy any of the three criteria.	- Reluctance of the health service providers. - Work loads. - Bad attitude of the physicians. - Unplanned work conditions. - Overcrowdeness.

Criterion no	Problem description	Problem causes
4-3 Breast examination **4-5 Abdominal examination**	At all facilities the physician don't examines the breast or the abdomen of any newly registered pregnant.	- The abd. examination of the pregnant needs a skillfull trained physician. - Traditions and cultural barriers. - The physcians are afraid to be accused for abortion.
4-6 Management.	All the facilities satisfy this criterion which include tetanus toxoid immunization, description of treatment and referral if needed .	
5- Periodically visiting pregnants care : **5-1 Asking the pregnant about her condition or any compliant**	The nurses or the physians during revision of the pregnants cards don't inquire the pregnants about their conditions or asking them about any complaint.	- The work load. - Bad attitude against the clients. -Worse unplanned working conditions.
5-2 Revision of the pregnant's cards.	This criterion is satisfied with at all facilities	
5-3 Basic measurements	At some facilities the periodically visiting pregnants are neither weighted not their B.P. are measured by the nurses during their visits.	- Syphmomanometers are badly maintained at some facilities. - Reluctance. - Overcrowdness

Criterion no	Problem description	Problem causes
5 - 4 Abdominal examination **5- 6 Lab. investigations** **5- 5 Limbs examination**	The same as mentioned in newly registered pregnants' care	
5-7 Management	This criterion is satisfied with at all facilities	
5-8 Home visits	The mentioned home visits schedule is not followed up by almost all facilities.	- The reluctance of the health service providers. - Exposure to sarcasm by some home inhabitants which render this tasks meticulous. - At urban areas, a specific mean of transportation is needed.
6- Post natal care **6-2 Preparing for the postnatal visits** **6-8 Referral to the physician**	These two criteria were complied with at all facilities	
6-1 Visitis' schedule implementation **6- 3 first post natal visit** **6 – 4 2nd postnatal visit** **6-5 third postnatal visit** **6-6 4th postnatal visit** **6-7 5th postnatal visit**	The recommended schedule for the post-natal visits are not followed up although their data were completely registered at the postnatal file.	- The reluctance of the health service providers. - Exposure to sarcasm by some home inhabitants which render this tasks meticulous. - At urban areas, a specific mean of transportation is needed.

Criterion no	Problem description	Problem causes
7- Health education **7-1 Demonstration tools**	The wall hanged demonstration bosters at the clients' waiting room are found only at some facilities.	Absence of the clients' waiting room at same facilities.
7-2 Pregnants' health education. **7-3 Postnatal health education.**	The mentioned schedule (time and contents) of the health education sessions for the pregnants and for the women at puerperium is not followed up strictly at all facilities.	- Unplanned sessions. -The health education at puerperium is an out door activity with many obstacles which are discussed before.
8- Recording and reporting **8-1 Completeness of the data in the files and cards**	- Some facilities complain of inadequate or absence of the files and cards. - Incomplete data registration.	-Deficient supply of the printed files by district level. - No adequate time to fulfill data registration at all spaces of the files due to the work load and lack of training.
8-2 Accuracy of the data	- Some facilities complain of inaccurate data registration.	
8-3 Periodic reports	The health program activities are not demonstrated in the form of tables or graphs every 4 months.	These activities are not asked for by the district level
9- DAYAS' program program **9-1 Follow up of the duties of the trained DAYAS**	The follow up file of the DAYAS don't contain: - Data about the evaluation of their duties. - Precise data about the supervision visits on them by the nurses.	- The duties of the DAYAS were in direct contract with and are followed up by the district level. - The DAYAS were in direct contact with the district level.

Criterion no	Problem description	Problem causes
9-2 Supply the DAYAS with the needed materials	This criterion is satisfied with at all facilities	
9-3 DAYAS' training and managing the DAYAS problems.	The DAYAS' files at all facilities don't contain: - Data about periodic meeting of the health service providers with them. - Data-about their training by the health service providers .	- The duties of the DAYAS are in direct contact with and are followed up by the district level.
9-4 Referral of the cases from the DAYAS to the facility	- At all facilities there are no referral file for the referred cases from the DAYAS. - DAYAS don't inform the facility about the pregnants or the unvaccined children data.	
Service outcome **10- Service performance indicators** **10-1 Antenatal care coverage percentage.**	All the facilities achieve the required percentage (not less than 45%).	
10-2 The Average number of the recroded pregnants visits	Some facilities don't achieve the needed average number (not less than 4 visits for every recorded pregnant at the facility).	- High percentage of drop outs. - A considerable number of women believe that there is no need for the frequent visits as long as they were apparently healthy.

Criterion no	Problem description	Problem causes
10-3 The vaccination percentage of the recorded newly registered pregnants	All the facilities don't achieve the required percentage (at least 90% of the recorded newly registered pregnants.	The restrictions around the TT sessions (e.g. Starting late, lasting for only limited time).
10-4 The percentage of the low birth weight neonates at birth	Only some facilities don't achieve the required percentage (not less than 2% and not more than 10%).	Dependence on rough estimation of the weight by eyes which is not accurate.
10-5 The average number of the post natal home visits	None of the facilities actually achieve the average number although their data are completely registered.	- The reluctance of the health service providers. - Exposure to sarcasm by some home inhabitants which render this tasks meticulous. - At urban areas, a specific mean of transportation is needed.

VII- Problems and possible of the labour services in PHC facilities of Qalyobia Governorate based on criteria of its components

Criterion no	Problem description	Problem causes
Special Resources **1- Essential equipments at all facilities providing natal care.** 1-1Labour instruments and materials. 1-2 Instruments for caring of the newly born 1-3 Surgical instruments 1-4 Home deliveries (labour) bags	All these criteria are satisfied with at all the studied facilities	
2- Additional equipments at facilities with specialized labour department 2-1 Additional surgical equipments 2-2 Newly born caring instruments	These criteria are satisfied with at all the studied facilities	
2-3 Anaesthetic equipments	The anaesthetic equipments are not available at some facilities	It is only allowed to manage normal labour without any surgical interference which may result in additional complications.
2-4 Sonography 2-5 Solutions	These 2 criteria are satisfied by facilities	
3- Materials needed to mange labours 3-1 wears 3-2 Newly born needed materials	These 2 criteria are satisfied by facilities	
3-3 Medical and surgical gloves	The amount of the gloves are insufficient for at least 2 months according to the monthly expenditure rate by the facilities.	Deficient supply of the gloves by the district level.

Criterion no	Problem description	Problem causes
3-4 Labour management drugs **3-5 Lab. materials** **3-6 other pharmaceutical materials** **3-7 other materials** **3-8 registration and Recording files**	These 5 criteria are satisfied by all facilities	
4- Additional materials at the specialized labour departments **4-1 Additional medications**	Neither the pethadine ampoules nor the general anaesthetic medication NO_2 are available.	The labour is managed without any interference
4-2 solutions	The sterilized blood transfusion devices were not available at some facilities	Bleeding occurs the case will be referred immediately to the nearby hospital
4-3 Blood bank	This criterion was satisfied with at all facilities	
Process **5- Reception and Nursing services** **6- Medical examination** **7- During labour care**	These components could not be studied.	Low rate of labours
8- Health education **8-1 Demonstration tools:**	They are satisfied by all facilities	
8-2 Health education of woman at puerperium	This criterion have not been satisfied by all facilities	The unfollowed schedule of postnatal home visits

Criterion no	Problem description	Problem causes
9- Recording and reporting		
9-1 Accuracy and completeness of the data in the files and cards	At all health facilities; - Some health program's printed files were not available. - The data registration are not completed	- Deficient supply of the printed files by the district level. - No adequate time to fulfill data registration at all spaces of the files due to the work load and lack of training.
9-2 periodic reports	The health program activities are not demonstrated in the form of tables or graphs every 4 months	These activities are not asked for by the district level.
Outcome **10- service performance indicators** **10-1 The coverage rate of the labours managed by the facility medical team** **10-2 the percentage of the labours managed by the facility medical team in relation to the filed pregnants** **10-3 The percentage of the partogrpahs with completed data** **10-4 the percentage of the low birth weight new borns of the filed pregnants**	These 4 indicators can not be calculated	No available data
10-5 the parentage of the still births at the facility.	All the facilities satisfy this criterion (with a percentage less than 3%)	