

The effect of gynecologists permanent presence on social security hospital indices: 2010-2011

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Abstract

Background: Promotion of mothers' health is one of the essential pillars of health-treatment cares. In the early years of health settlement and treatment system in the country, mothers' health as a vulnerable group has been paid special attention by health plan policy makers in which the increase in accessing/successful pregnancy, delivery and after birth cares has been considered as a priority Issue. Nowadays, the health structure of the country tries to promote mothers' services with the motto of "healthy mother, healthy society, and healthy life".

Method: In a semi-annual research in 2010-2011 in the gynecological ward of Social Security Hospital, required data were extracted and were assessed in respect of interventional effect through questionnaire method; and comparison carried out before and after intervention through double-t test in SPSS software. Target indices in this study include the cesarean %age, patients' average stay and ward's bed occupancy coefficient, mortality, and patients' satisfaction.

Findings: The mean %age of unrepeated cesareans before and after intervention was 35% and 30% of the births during the period respectively; and the increase observed in this index was confirmed with an assurance coefficient of 95% and p value=0.001; also, occupancy coefficient, average stay index of patients before and after intervention was 1.98 and 1.71 days respectively with assurance coefficient of 95% p value =0.001 was confirmed. In respect of mortality both before and after intervention was zero. Regarding patients' satisfaction index in gynecologist ward, this index before intervention was 90.81% which after intervention increased to 98.95% indicating a satisfactory increase in gynecological ward.

Conclusion: The results indicate that presence of gynecologists in hospitals can affect the controlling and decreasing the redundant & unrepeated cesarean % age and besides, it can decrease the average stay and optimize the use of hospital beds and decrease the mortality of mothers and ultimately increase the satisfaction which is acquired through continuous controlling and increasing of access level of patients.

Keywords: Resident physician, unrepeated cesarean, Satisfaction, Average mortality, Length of stay

1. Introduction

Health and hygiene are considered as the fundamental rights in human communities and based on the Constitution, should be accessible to everybody in an easy way. Any member of a society should have the right to benefit from health facilities and services (Basiry, 2001)

One of the most significant indices in the world that is considered as a cornerstone in development is the mortality rate caused by the side effects of pregnancy (M.M.R). Maybe the reason for choosing this index as a development index in countries is the role of various factors in reduction or increase of that. By studying the profile of the mothers' death right after the initial sign of pregnancy, receiving the pregnancy cares and then the cause, time and the condition of child delivery and hospital services are considered of high importance (Delavar, 2002).

Health indices are the most significant factors revealing the Health systems' function that should be paid attention regularly and in intervals. One of the most critical responsibilities of these systems is surveying. Maybe it's because of the lack of assurance in indices and their functions that nowadays the health indices have increased in the country as well as in some areas of developed countries. (Tabibi, 2002)

Pregnancy and health cares for its impact on health indices have drawn the attention of health policy makers. One of the main issues in recent years is the high rate of Cesarean operations compared to natural birth. Cesarean operation that is

necessary in urgent cases as well as vital for mother or the embryo unnecessary cases not only it imposes a large amount of cost but also may increase the side-effects. Reported statistics indicating the cesarean rate in some of the celebrated countries around the world are as follow:

United States: 30.3 %, Germany: 27.8 %, England: 22 %, France: 18.8 %, Italy: 38.2 %, Sweden: 17 %, Egypt: 27.6 %, Denmark: 21.4 %, Japan: 17.4 %, China: 25.9 %, Turkey: 21.2 %, Russia: 18 %, Iran: 41.9 %, Brazil: 45.9 %. It's worth mentioning that according to the aforementioned statistics in current study, Iran has the second rate of Cesarean operations after Brazil, among 137 countries of high birth rate 95% (GibbonLuz Josem *et al.*, 2010).

Devising and applying the legal necessities and prerequisites in the field of Mothers' health and mortality control and High-rate of cesarean in Healthcare centers in recent years culminated in movements such as: State mortality control system for mothers, "Loving mothers" hospitals and change in evaluation structures of hospitals. Based on the commitment of Islamic Republic of Iran to obtain the Millennium goal, the mortality rate of mothers up to the year 2015 should be decreased to 75 % compared to that of 1990 (Emami Afshar *et al.*, 2002).

In recent years, health system officials in various countries have used several methods to increase the quality and security of health services as well as management optimization. Budgeting is of special role in health sector. Budgeting as the first step in Healthcare centers is based on current standards and adopted from the latest applicable resources in developed and developing countries and according to this program, gynecological ward must benefit from the full-time or (24/7) presence of gynecologists (Jafari, 2010)

Based on the aforementioned issues, one of the solutions is the optimum use of human resources. Therefore, as far as the human resources are the most significant assets of every organization we should devise programs to make it possible to employ rational, logical and beneficial utilization of resources (Kazemi, 2001).

2. Material and Methods

This survey is an applied survey based on results and quantitative based on administration and intermediary based on the effect of full-time (24hrs.) presence of gynecologists that is surveyed in the Gynecological ward of the Social security hospital in Qazvin in a comparative & interruptive procedure.

Statistics are gathered from the patients' profiles in Gynecological ward of Zakaria Razi in Qazvin and the population under study is consisted of hospitalized patients at the gynecological ward before and after the delivery in two intervals, one before the administration of the plan and the other, after the end of the plan (after 6 months) 1389-1390.

The relevant sample is equal to the number of dismissed patients and maternal mortality in gynecological ward at the first six-month period before and after the plan that's consist of "5417" patients. 2684 patients out of 5417 are related to the pre-execution of the plan & Intervention and 2733 patients are related to the post-execution of the plan & Intervention. Regarding the unrepeated Cesarean indices, average length of stay and mortality, the method under investigation has been the census sampling method.

About the satisfaction index of the sampling mass within the first 6-month period before the intervention, 230 questionnaires and the second 6-month period of the year 1390, 253 questionnaires after the intervention using the simple sampling has been distributed and collected.

The tool applied to devise the data was based on the questionnaire and the data required for this survey including the unrepeated Cesarean operations, the average stay of patients and mortality gathered through the hospital information & patients' information management of the hospital.

The number of unrepeated cesarean and the average stay that in fact was the mean of each group of patients stayed in the hospital obtained by comparing the data before & after the intervention. The meaningful change is measured by the "double t test".

3. Results

Findings based of unrepeated cesarean indicate that the mean of unrepeated cesarean done by the Full-time gynecologist has decreased from 35 % to 30 %. The "double-t test" of 95 % reliability and p-value of 0/006 shows a meaningful relationship. In another words there's a meaningful relationship between the presence of gynecologists and decrease in unrepeated cesareans in hospitals (Table 1).

Table 1. The unrepeated cesarean distribution in Razi Hospital Year 2010-2011

Year	Samples	Mean of Cesarean	Standard Deviation (SD)	Result of t-test
2010	2684	35	2.23	0.006
2011	2733	30	2/87	

Findings indicate that the mean of the patients in gynecological ward of the hospital before the presence of the full-time gynecologists decreased to 1/98 day and after the intervention it decreased to 1/71 day which proves the meaningful relationship by the double-t test with the reliability of %95 and p-value of 0/001. There's a meaningful relationship between the presence of gynecologists and the decrease in unrepeated cesarean in hospitals (Table 2).

Table 2. Average of patients' stay distribution in Razi Hospital Year 2010-2011.

Year	Samples	Average stay	Standard Deviation (SD)	Result of t-test
2010	2684	1/98	0/114	0/001
2011	2733	1/71	0/041	

Regarding the average of the hospitalized patients diagnosed with various cesareans, abortion and natural delivery, statistics indicate this fact that in all 3 groups that constitute the major rooms of the hospital, the average stay (hospitalization) is decreased and regarding the patients that treated by medicine, there is no unusual distinction.

Regarding the mortality rate, by considering the stability of the index under survey and the lack of increase of mortality in the above-mentioned ward, It can be declared that there's a meaningful relationship between the presence of gynecologists and mortality of mothers and after the intervention no death has been reported.

The findings in this survey according to the significant satisfaction of gynecologists' presence and the surge in patients' satisfaction regarding the manner and conduct of the physicians as well as attention and guides and explanations they offer, the time intervals of the visiting and availability while needed prove that 90/95 % before the intervention increased to 98/81 % after intervention (Table 3-4).

Table 3. The distribution of satisfaction index among patients in the gynecological ward of Zakaria Razi, Qazvin (1389-1390)

Year	Samples	Number of Questionnaire	Satisfaction index	Increase rate
2010	2684	230	90/95	7/87
2011	2733	250	98/81	

Table 4. Status of indices under survey before & after the effect of gynecologists' presence

Effect	After intervention	Before intervention	Type of index
*	30%	35%	Unrepeated Cesarean
*	0	0	Mortality
*	1/71	1/98	Average stay (day)
*	98/81	90/95	Satisfaction (%age)

4. Discussion and conclusion

The presence of gynecologists in hospitals has been effective in the number of unrepeated Cesarean Operations and decreased this index. Therefore, it can be concluded that there is a meaningful relationship between the permanent presence of gynecologists and the number of unrepeated Cesareans.

This matter is in total agreement with the result of research by Chaillet Nils et al. (2007) which consider the decreasing rate of healthy cesarean by intervention of the forces in rectifying the functional procedures and Gamble who believes that the reason for choosing the cesarean operations is the inadequate or shortage of human resources (Gynecologists) as well as supplies. Furthermore, by referring to the Chric et al. (2007) study results that the women's requests for cesarean are related to the conducting role of the gynecologists and Gamble *et al.* (2001) expresses the distress of not receiving the adequate and quality-assured health services as a responsible factor in this issue.

The presence of gynecologist affects the average stay of patients and has decreased this index. Hence, it can be deduced that there is a meaningful relationship between the permanent presence of gynecologists and the average time of stay in patients. This matter is the same as the result of Dimick (2001) and Gajic Ognjen et al. (2008) they concur that the permanent presence of gynecologists can decrease the average length of stay in gynecological ward.

But it's not in agreement with the Helling et al. (2003) and Willette et al. (2009) results, because they believe that the permanent presence of the gynecologists in hospitalization services along with the medical treatment during the patients' stay not just in emergency cases, decrease their time of hospitalization. Also, Kumar Kanwal et al. (2009) believes that the local and constant cares in intensive care units can decrease the average time of stay (Golamipour, 2002).

The presence of gynecologists has affected the mortality of mothers and caused the stability of this index around Zero. Therefore, it can be concluded that there is a meaningful relationship between the gynecologists' presence and the average of patient stay. This result is in conformity to the studies in a way that he believes that the results of full-time medical care are effective on the mortality of the patients in intensive care units. Badieyan (2005) in a survey in the cause of mothers' mortality sent to the autopsy (Forensics), declare that the cause of death is because of the absence of specialized physician and Mousavi declares that the highest mortality in pediatric unit is the result of inaccessibility to the specialized physician (Brown Sullivan et al. 1989).

The presence of gynecologist has increased the patients' satisfaction rate and increased this index. Therefore, it can be concluded that there's a meaningful relationship between the permanent presence of gynecologists and patients' satisfaction. These results are in total agreement with Chric mcourt et al. (2007) study that indicates "The presence of full-time gynecologists is the reason of lower side-effects in patients and increase of patients' satisfaction" and Dimick (2001) that believes that the presence of full-time gynecologists will result in improvement in treatments as well as low costs of high-risk surgical operations and increases the satisfaction rate (Gajic Ognjen et al. 2008).

Also Hejazi (2009) believes that the presence of pediatricians in pediatrics at proper time will result in satisfaction and intimate connections of parents and pediatricians.

Finally, it's concluded that the full-time presence of gynecologists by expediting the treatment process and constant care of patients will diminish the redundant unrepeated cesareans and average of stay in patients and mortality of mothers. Getting full access to gynecologists will result in more satisfaction of patients.

It's advised that hospitals reside the gynecologists, surgeons and anesthesiologists to increase their interventions in the necessarily life-threatening situations in addition to the promotion of the medical resources it will result in human resources optimization.

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6. References

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