

## Comparison between Nursing Performance and Standard of Care for Aborted Woman at Mansoura Hospitals

\*Shaimaa Amr, Samia I Hassan, Amina Sad Gonied,

<sup>1</sup>B.S.C Nursing, Faculty of Nursing, Mansoura University

<sup>2</sup>Lecturer of Women's and Midwifery Health, Faculty of Nursing, Mansoura University

<sup>3</sup> Prof. of obstetric & gynecological nursing, Faculty of Nursing, Zagzeg University.

Corresponding Author: Shaimaa Amr

### Abstract

**Aim of this study** was to Compare between nursing performance and standard of care for aborted woman at Mansoura hospitals.

**Study design:** A cross sectional descriptive study was used.

**Setting:** This study was conducted at the labor and delivery unit of governmental hospitals at Mansoura city.

**The Sample Type:** Sample type was convenient sample for health care provider.

**The sample size:** The current study was conducted on all health care providers and all attended for abortion at the study period. **Tools:** Two tools were used for data collection.

**Tool I: Interview questionnaire sheet:** The questionnaire sheet was designed by the researcher, it consists of demographic data of nurses.

**Tool II: Clinical Policy Guidelines for abortion 2014 performance Standards for abortion (NAF).**

**Results:** the study revealed that the old general hospital nurses achieved a higher practice mean score (157.25 ±1.98) than other studied hospitals.

**Conclusion:** This study concluded that the current practices of all nurses for abortion were highly achieved the performance standards for abortion published by NAF 2014.

**Recommendations:** Strengthen pre-service education of all health care providers to ensure competency-based approaches that lead to stronger performance in and retention of knowledge and skills as well as evidence-based practices that meet the priority health care needs of Egypt.

**Keywords:** Abortion –Standard– Quality.

Date of Submission: 02-06-2017

Date of acceptance: 15-07-2017

### I. Introduction

The word abortion derives from the Latin “aboriri” that means “to miscarry”. Abortion means ending of pregnancy before fetus can survive on its own, and in this sense it is synonymous with miscarriage. It also means an induced pregnancy termination to by removing the fetus or embryo from the uterus. Although both terms are used interchangeably in a medical context, popular use of the word abortion by physicians implies a deliberate pregnancy termination. Thus, many prefer “miscarriage” refer to spontaneous fetal loss before viability (Grimes and Stuart, 2010).

Although legal, religious and social regulations save women in Egypt from terminating their unwanted pregnancies, many women seek to go through abortion throughout the country. Whether performed for clinical or other motives, abortion remains a controversial and hotly-debated problem in Egyptian society. In gynaecology, specialists are differ in their opinions. A few believe abortion is a shape of murder, others assume it lies inside the fundamental rights of women to have full manipulate over their bodies. The question of whether or not abortion is morally incorrect persists inside the hearts and minds of many girls while considering terminating a pregnancy (Shalaby, 2013).

In Egypt, there are few dependable statistics on the incidence of abortion in the country. Though, a survey reported that women admitted that 10.5% of their pregnancies ended abortion, 40% of admitted women from obstetric and gynecological condition to hospital are refers to abortion. Annually about 336000 cases of abortion in public hospitals treated from these cases (35%) are spontaneous. 5% are certainly induced (evidence of trauma or the patient admits induction), 60 % are considered as possibly induced (presence of sepsis or women admit that the pregnancy was unwanted). (Hassan et al., 2005).

The organized nursing care aims to offer safe, capable, and moral nursing care to society so standards allow the nurse to carry out their professional roles, serving as a protection for the nurse, the affected person and the agency wherein fitness care is supplied. Every nurse is responsible for her/his very own best of practice, and

is accountable for the usage of these requirements to make sure knowledgeable, safe, and complete nursing care (College of Registered nurses of British Columbia, 2013).

. In addition a standard is defined as a collection of rules, guidelines, or desired characteristics for physical objects, materials, activities, behaviors, performance, quality, which are combined in a technical file, to have an most beneficial degree of achievement of the functioning of any equipment , procedure, system, or organization (American nurses association, 2014).

Additionally promote and guide our medical exercise. As it offer a framework for growing clinical competency checklists or proficiency evaluations for a selected medical unit or company, and may be used to assess a nurse's care. If there may be suspicion of the nurse has developed unsafe work behavior or isn't adhering to established organizational guidelines or drastically familiar guidelines accepted by means of nation and federal legal guidelines or leading healthcare organizations, (Charlotte Davis, 2014)

. There is a need to apply high standardized care to enable nurses to plan, deliver, develop and evaluate abortion services within their scope of practice. The qualified nurse should be dynamic and respond to the changing needs of the abortion process. The nurses' services must meet health needs in a variety of health settings during the abortion (Freedman et al., 2015).

Ensuring high quality of aborted woman care is a primary goal in reducing maternal mortality and morbidity as well as improving neonatal outcomes in many developing countries. A significant percentage of life-threatening complications occur around the time of childbirth or immediate postpartum and cannot be predicted. Hence availability and accessibility of comprehensive obstetric care have become priorities in many strategies to reduce the incidence and sequelae of life-threatening complications related to pregnancy and childbirth, (Pitch forth et al.2010 and Mellows 2010).

in addition excessive excellent of maternity care is a need for supplying a minimal stage of care to all pregnant women and their newborn babies; consists of a better level of care to those who want it; Care provision with the high-quality feasible medical final results of mother and child; supplying care which satisfies customers and carriers; preserving sound managerial and financial performance; And develop existing services so that you can raise the requirements of care supplied to all women (UNICEF, 2009 and Hussein et al., 2012).

#### **Significance:**

One of the most easily preventable causes of maternal death and morbidity as a result of unsafe abortion is performing legal safe abortion under medical supervision. In Egypt abortion is legal only if performed to save a woman's life, other attempts to procure an abortion are punishable. Most induced abortions are performed under unsafe conditions, contributing to high maternal mortality ratio. There is no any study to assess practices regarding abortion utilized at governmental hospitals at Mansoura City and their consistency with performance standards, so it is the first study in Mansoura city.

#### **Aim of the study:**

The aim of this study is to compares between nursing performance and standard of care for aborted woman at Mansoura hospital

#### **Research Question**

Are nurses' practices regarding abortion at Mansoura governmental hospitals consistence with performance standards?

#### **Subjects and methods:**

##### **Study design:**

This study was a cross sectional descriptive design.

##### **Setting:**

This study was carried out at the labour and delivery unit in Mansoura District, Dakahlia Governorate, Mansoura General Hospital, Mansoura International Hospital, and Sandoub Health Insurance Hospital, in Dakahlia Governorate

##### **Study subjects:**

The subjects of the study included all health care providers, (obstetricians and nurses) and post aborted women.

##### **Inclusion criteria:**

- All legal aborted women who have complication during abortion and accept to participate in the study.

##### **The sample size:**

The current study was conducted on all nurses and all attended for abortion at the study period for six months from (June 2015) to (December 2016) who met the study criteria at the previously mentioned hospitals.

##### **The Sample Type:**

Sample type was convenient sample for health care provider

##### **Tool of study:**

To achieve the aim of this study, two tools were used in data collection

**Tool I: Interview questionnaire sheet.**

The questionnaire sheet was designed by the researcher, it consists of demographic data of nurses who were involved in the provision of direct woman care, such as age, residence, level of education, years of experience... etc.

**Tool II: Observational checklist to assess health care provider by Clinical Policy Guidelines for abortion 2014 performance**

Standards for abortion :( National abortion federation (NAF) 2014):

Including 17 items, which begin with who can provide abortion, and ended with evaluation of evacuated uterine contents was assessed by using checklist for clinical performance.

**Pilot study:**

A pilot study carried out on 10 % (18 days) of the nurses in Mansoura governmental hospitals to test applicability and clarity of the tools, modification was done according to the results of pilot study and exclude from study sample.

**Ethical considerations and administrative design:**

Ethical approval obtained from the research ethics committee of the Faculty of Nursing – Mansoura University.

An official permission to conduct the study obtained from the responsible administration of the hospitals.

Privacy and confidentiality of the collected data would assured

**Field work:**

The actual fieldwork of the study conducted for 6 months period from (June 2015) to (December 2016) to collect the data needed for assessment of the nurses' practices who was involved in providing direct care for aborted women during the study period in each labour and delivery unit in all studied hospitals. An individual interview was conducted by the researcher using two tools and explanation about the aim and nature of the study was discussed for all obstetric nurses and aborted women.

Data was collected according to the hot days for each governmental hospital. The hot days were Saturday & Wednesday for the international hospital & Friday for the old general hospital and the other days for health insurance hospital. The researcher attended in each hospital according to the hot days from 8:30 am to 8:00pm. All obstetric nurses who were worked in the hot days and providing direct woman care during abortion was observed by using checklist to assess their practice and included in the study.

**Statistical Design:**

Analysis of data and statistical results were done by using SPSS package version 20.0. All data were categorical and were expressed in number and percent. For comparison of the categorical data among the groups the chi square test was used. Statistical significant difference was considered at p - value <0.05, and highly significant difference at p - value <0.001, also considered non-significant difference at p – value >0.05.

**II. Result**

**Table1:** General characteristics of health care provider among Mansoura governmental hospital frequent distribution of general characteristics of studied sample (nurses) at Mansoura governmental hospitals:

	Health insurance N(14)		International N(10)		Old general N(8)		Chi square test	
	n	%	N	%	N	%	X2	P
<b>Age (years)</b>								
≤30	4	28.6	7	70	4	50	7.494	0.112
31 – 40	10	71.4	3	30	3	37.5		
41 – 50	0	0	0	0	1	12.5		
<b>Sex</b>								
Males	0	0	0	0	0	0	0	1.000
Females	14	100	10	100	8	100		
<b>Residence</b>								
Urban	11	78.6	7	70	1	12.5	12.314	0.002**
Rural	3	21.4	3	30	7	87.5		
<b>Experience (years)</b>								
1 – 3	0	0	0	0	2	25	10.198	0.037
4 – 6	1	7.1	3	30	0	0		
>6	13	92.9	7	70	6	75		
<b>Level of education</b>								
Diploma	13	92.9	2	20	4	50	20.653	<0.001**
Higher institute	1	7.1	8	80	2	25		
Bachelor	0	0	0	0	2	25		

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

Table (1) shows that more than two third of studied nurses (71.4%) were in the age of (31-40 years), most of nurses (87.5%) were from rural areas. In relation to years of experience in labor unit, one quarter (25%) of the health care providers had less than 3years of experience of old general hospital, (30 %) of them had work experience from 4\_ 5years at international hospital. Moreover there was significant difference regarding years of experiences. Also this table found that there was highly significant regarding residence, level of education among Mansoura governmental hospitals. While the majority (92.2%) ,three quarter(75%) and near to three quarter(70%) had more than 5 years of experience at health insurance, old general and international hospital respectively. Regarding the level of education found that the majority of nurses (92.9 %) had diploma, while (80%) of them had higher institute, and one quarter had bachelor degree.

**TOOLII: Clinical Policy Guidelines for Abortion performance standards :( National abortion federation (NAF) 2014) to assess of health care provider practical skills regarding utilization of clinical policy guideline for abortion performance standard.**

**Table 2: Frequency distribution of observational practice among studied Mansoura governmental hospitals regarding (Who can provide abortion, Patient Education, Counseling and informed Consent, Infection prevention and control and RH testing and RH immunoglobulin administration)**

Item	Number of Standard	Health insurance N=14				International N=10				Old general N=8				Chi square test	
		Done		Not done		Done		Not done		Done		Not done		X2	P
		n	%	n	%	N	%	n	%	n	%	n	%		
1. Who can provide abortion	Sd1.Abortion will be provided by licensed practitioners. This category is intended to include physicians from various specialties as well as nurse midwives, nurse practitioners, physician assistants, registered nurses, and other health professionals.	14	100	0	0	9	90	1	10	8	100	0	0	2.271	0.321
	Sd2.All practitioners providing abortions must have received training to competency in abortion care, including the prevention, recognition, and management of complications.	14	100	0	0	8	80	2	20	8	100	0	0	4.693	0.096
2. Patient Education, Counseling and Informed Consent	Sd1.The practitioner must ensure that appropriate personnel have a discussion with the patient in which accurate information is provided about the procedure and its alternatives, and the potential risks and benefits. The patient must have the opportunity to have any questions answered to her satisfaction prior to intervention.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.There must be documentation that the patient affirms that she understands the procedure and its alternatives, and the potential risks and benefits; and that her decision is voluntary.	0	0	14	100	2	20	8	80	0	0	8	100	4.693	0.096
	Sd3.Each patient must have a private opportunity to discuss issues and concerns about her abortion.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

	Sd4. A patient must undergo the abortion as expeditiously as possible in accordance with good medical practice.	14	100	0	0	8	80	2	20	8	100	0	0	4.693	0.096
	Sd5. Information about aftercare and contraception must be available to patients at the facility.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd6.All reasonable precautions must be taken to ensure the patient's confidentiality	0	0	14	100	2	20	8	80	0	0	8	100	4.693	0.096
3. Infection Prevention And Control	Sd1.Proper engineering and work practice controls should be in place to reduce exposure of patient and staff to infectious materials	14	100	0	0	9	90	1	10	8	100	0	0	2.271	0.321
	Sd2.Exposure control plans must be established and followed.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.All surgically removed tissue must be considered bio hazardous and be handled; stored, and disposed of in a manner that minimizes the risk of exposure	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
4. RH Testing And RH Immunoglobulin Administration	Sd1.Rh status testing must be offered to all women undergoing first-trimester abortion	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2. Rh status must be documented in all women undergoing second-trimester Abortion.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.RH immunoglobulin administration must be offered to RH- women.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4.If Rh immunoglobulin is not administered in the facility, one of the following is required : (a) Informed waiver signed by a patient who declines Rh immunoglobulin. (b)Documentation of other arrangements for administration.	1	7.1	13	92.9	10	100	0	0	8	100	0	0	28.15	<0.001* *

This table clarifies that the health insurance & the old general hospitals were competent achieved (100%) while the international hospital was achieved (90% and 80%) criteria of (Sd1&Sd2) respectively which related to "Who can provide abortion "and there were no significance differences among all studied hospitals . Also it presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 3, 5) ,also ,this table found that health insurance and old general hospital hadn't achieved standard6 which related to "Patient Education, Counseling and Informed Consent" and there were no significance differences among all studied hospitals .

The table presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 3), except the international hospital was achieved (90%) with just item (1) which related to "Infection Prevention and Control" and there were no significance differences among all studied hospitals, and presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 3, 4) except the health insurance hospitals weren't achieved (92.9) all criteria of standard (4) which related to ". RH Testing and RH

Immunoglobulin Administration " and there were highly significance differences among all studied hospitals (P<0.001\*\*) regarding the fourth item.

**Table3: Frequency distribution of observational practice among studied Mansoura governmental hospitals regarding (limited sonography in abortion care and early medical abortion care.)**

Item	Number of Standard	Health insurance N=14				International N=10				Old general N=8				Chi square test	
		Done		Not done		Done		Not done		Done		Not done		X2	p
		N	%	n	%	N	%	N	%	N	%	n	%		
5. Limited Sonography In Abortion Care	Sd1. Staff members who perform ultrasound exams and clinicians who interpret those exams must either show documentation of proficiency or complete a program of training. Training must include a period of supervision. Documentation of this training must be maintained.	13	92.9	1	7.1	0	0	10	100	0	0	8	100	28.15	<0.001*
	Sd2. A system of proficiency review must be in place for staff members who perform ultrasound exams and clinicians who interpret those exams.	13	92.9	1	7.1	1	10	9	90	0	0	8	100	24.57	<0.001*
	Sd3. Patients must be informed of the purpose and limitations of the ultrasound exam in the abortion care setting. Patients must be informed of the sonographic diagnosis, including early pregnancy failure.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4. The findings of all ultrasound exams and the interpretation of those findings must be documented in the medical record. This documentation must also include the name(s) of staff who performed and interpreted the exam	14	100	0	0	1	10	9	90	3	37.5	5	62.5	20.724	<0.001*
	Sd5. A limited first-trimester ultrasound exam must include the following: 1) A full scan of the uterus in both the transverse and longitudinal planes to confirm an intrauterine pregnancy. 2) Evaluation of pregnancy number. 3) Measurement to document gestational age. 4) Evaluation of pregnancy land marks such as yolk sac or the presence or absence of fetal embryonic cardiac activity	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd6. A limited second-trimester ultrasound exam must include the following :	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

	1) Views to document intrauterine location of the pregnancy. 2) Evaluation of fetal number. 3) Fetal measurements to document gestational age. 4) Evaluation of fetal cardiac activity. 5) Placental location.														
	Sd7.Ultrasound equipment must be properly maintained	1	7.1	13	92.9	1	10	9	90	0	0	8	100	0.792	0.673
	Sd8.Ultrasound transducers must be disinfected between patients	1	7.1	13	92.9	0	0	10	100	0	0	8	100	1.327	0.515
6. Early Medical Abortion	Sd1.Initial evaluation must include pertinent medical history	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.The patient must be informed about the efficacy, side effects, and risks, especially excessive bleeding and infection.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.The patient must be informed of the need to ensure the success of the abortion and of the teratogenicity associated with the medications to be used.	14	100	0	0	9	90	1	10	8	100	0	0	2.271	0.321
	Sd4.The patient must be informed that a uterine aspiration will be recommended if medical abortion fails	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd5.Patient instructions must include written and oral information about use of medications at home and symptoms of abortion complications.	0	0	14	100	3	30	7	70	0	0	8	100	7.283	0.026**
	Sd6.The facility must provide an emergency contact service on a 24-hour basis and must offer or assure referral for uterine aspiration if indicated.	0	0	14	100	3	30	7	70	0	0	8	100	7.283	0.026**
	Sd7.Confirmation of pregnancy must be documented. Gestational age must be verified to be within the limit of the facility medical abortion protocol.	14	100	0	0	3	30	7	70	0	0	8	100	23.567	<0.001**
	Sd8.If an ultrasound has been performed and an intrauterine gestation has not been confirmed, ectopic pregnancy must be considered. Additional evaluation should follow a protocol as outlined in CPG 8. Management of pregnancy of uncertain location. Starting the medical abortion regimen does not need to be delayed.	14	100	0	0	0	0	10	100	0	0	8	100	32.00	<0.001**
	Sd9.Combined mifepristone <sup>™</sup> misoprostol regimens are ineffective than misoprostol alone or methotrexate and misoprostol.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

	An evidence based medical abortion regimen must be used.														
	Sd10.Patient comfort level during the medical abortion process must be considered.	2	14.3	12	85.7	0	0	10	100	0	0	8	100	2.743	0.254
	Sd11.Success of the medical abortion must be assessed by ultrasonography, HCG testing, or by clinical means in the office or by telephone. If the patient has failed to follow-up as planned, clinic staff must document attempts to reach the patient. All attempts to contact the patient (phone calls and letters) must be documented in the patient's medical record.	0	0	14	100	1	10	9	90	0	0	8	100	2.271	0.321

Table (3) presents that the international hospital & old general hospital hadn't achieved (100%) all criteria of standard (1) & hadn't achieved (90% & 100%) respectively all criteria of standard (2,7,8) which related to ". Limited sonography in abortion care " and there were highly significance differences among all studied hospitals ( $P < 0.001$ ) about standard (1, 2) but no statistical differences regarding standard (7, 8). Also it shows that all studied hospitals were competent achieved (100%) all criteria of standard (3, 5, 6) which related to and there were no significance differences among all studied hospitals.

In addition it presents also that the health insurance hospital was competent achieved (100%) and the international hospital hadn't achieved (90%) and the old general hospital hadn't achieved (62.5%) all criteria of standard (4) which related to ". Limited Sonography in Abortion Care " and there were highly significance differences among all studied hospitals ( $P < 0.001$ ). Also it presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 4, 9) and there weren't significance differences among all studied hospitals. Also the health insurance hospital & the old general hospital were competent achieved (100%) and the international hospital was achieved (90%) all criteria of standard (3) and there were no significance differences among all studied hospitals. Also the international hospital hadn't achieved all criteria of standard (5, 6) which related to "Early Medical Abortion" and there was significance differences among all studied hospitals ( $P = 0.026$ ).

In addition the international hospital and the old general hospital hadn't achieved (100%) and the health insurance hospital was competent achieved (100%) all criteria of standard (7, 8) which related to "Early Medical Abortion" and there was highly significance differences among all studied hospitals ( $P < 0.001^{**}$ ). And also the all studied hospitals hadn't achieved all criteria of standard (10, 11) which related to "Early Medical Abortion" and there was no significance differences among all studied.

**Table4: Frequency distribution of observational practice among studied Mansoura governmental hospitals regarding (First- Trimester surgical abortion and management of pregnancy of uncertain location:**

Item	Number of Standard	Health insurance N=14				International N=10				Old general N=8				Chi square test	
		Done		Not done		Done		Not done		Done		Not done		X <sup>2</sup>	p
		N	%	n	%	N	%	n	%	n	%	n	%		
7. First-Trimester Surgical Abortion	Sd1.Pertinent medical history must be obtained	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.Pregnancy must be confirmed and gestational age must be assessed.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.Appropriate initial evaluation must be performed. Baseline blood pressure and pulse must be obtained for all patients	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4.All instruments entering the uterine cavity must be sterile.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

	Sd5.The cervix should be appropriately dilated for the gestational age.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd6.First-trimester surgical abortion must be performed by aspiration of the uterus, not by sharp curettage.	14	100	0	0	3	30	7	7	0	0	8	100	23.567	<0.001* *
	Sd7.The procedure and all medications given must be documented.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd8.Termination of pregnancy must be confirmed prior to the woman leaving the Facility or further evaluation must be initiated.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd9.When insufficient tissue or incomplete products of conception are obtained, the patient must be re-evaluated.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd10.If insufficient tissue is present after adequate patient evaluation, ectopic pregnancy must be considered, and the patient must be informed of symptoms and dangers of ectopic pregnancy.	2	14.3	12	85.7	2	20	8	8	0	0	8	100	1.698	0.428\
8. Management Of Pregnancy Of Uncertain Location	Sd1. The patient's medical history must be evaluated in order to assess for the risk of ectopic implantation in early pregnancy. Certain signs and symptoms, such as vaginal bleeding, pelvic pain, and/or failure to identify a definitive intrauterine pregnancy.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2. Each facility must have a written protocol to evaluate ectopic pregnancy. All relevant staff at the site must be familiar with the protocol.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.All patients with a pregnancy of uncertain location must be informed of the Options for evaluation and management. The symptoms and dangers associated with ectopic pregnancy, and a plan for when and how to seek emergency medical attention must be reviewed and documented.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4.When a medical or aspiration abortion is initiated for a patient with a pregnancy of uncertain location, resolution of the pregnancy must be verified and documented. This may be demonstrated by either the examination of aspirated tissue or by following serial beta-HCG levels according to evidence-based regimens	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd5. Patient follow-up must continue until one of the following: (1) The diagnosis of ectopic pregnancy has been excluded; (2) Clinical resolution of a possible ectopic pregnancy has been ensured; or (3) Transfer of care to an appropriate provider has been made and documented.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd6. Patients experiencing symptoms suspicious for ruptured ectopic pregnancy must be evaluated emergently.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

Table (4) presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 3, 4, 5, 7, 8, 9) which related to "First- Trimester Surgical Abortion" and there weren't significance differences among all studied hospitals. Also presents that the health insurance hospital was competent achieved (100%)

while the old general hospital hadn't achieved all criteria of standard (6) which related to "First- Trimester Surgical Abortion" and there was highly significance differences among all studied hospitals ( $P < 0.001^{**}$ ). Also table shows that the all studied hospitals hadn't achieved (85.7% & 80% & 100%) respectively all criteria of standard (10) which related to "First- Trimester Surgical Abortion" and there weren't significance differences among all studied hospitals. And this table shows that all criteria were achieved among all studied hospitals and there were no significance differences regarding SD (1, 2, 3, 4, 5, and 6) which related to "Management of Pregnancy of Uncertain Location".

**Table5: Frequency distribution of observational practice among studied Mansoura governmental hospitals regarding (Abortion by Dilation and Evacuation and second trimester induction abortion).**

Item	Number of Standard	Health insurance N=14				International N=10				Old general N=8				Chi square test	
		Done		Not done		Done		Not done		Done		Not done		X2	p
		N	%	n	%	n	%	n	%	N	%	n	%		
9. Abortion By Dilation And Evacuation	Sd1: Pertinent medical history must be obtained and relevant physical examination must be performed.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2: Gestational age must be verified by ultrasonography, using a consistent and published table of fetal measurements, prior to the termination of a pregnancy clinically estimated to be more than 14 weeks from LMP.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3: The patient must be appropriately evaluated and prepared for the procedure	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4: When osmotic dilators, misoprostol, and/or other cervical ripening agents are used, a plan for emergency care prior to the evacuation procedure must be in place and communicated to the patient.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd5: Appropriate dilation of the cervix must be obtained gently and gradually.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd6: All instruments entering uterine cavity must be sterile.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd7: Evidence_ base practices must be used to lower the risk of complications.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd8: Uterotonics must be available to aid in control of uterine bleeding	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd9: Examination of the uterine contents must be performed to identify the placenta and all major fetal parts.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
10. Second- Trimester Induction Abortion	Sd1: Pertinent medical history must be obtained and relevant physical examination must be performed.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2. Gestational age must be verified by ultrasonography, using a consistent and published table of fetal measurements, prior to the termination of a pregnancy clinically estimated to be more than 14 weeks from LMP.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3. The patient must be appropriately evaluated and prepared for the procedure.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4. Evidence-based regimens of medical induction must be used.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd5. Once regular contractions have been confirmed, patients must be observed by health care staff trained to monitor contractions and expulsion, and who can	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

	recognize emergent situations.														
	Sd6.A trained clinician must be available from initiation of induction until post abortion discharge.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd7.Access to surgical management or appropriate referral must be available in the event that surgical intervention is required.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd8.Uterotonics must be available to aid in control of uterine bleeding.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd9.Examination of the uterine contents must be performed to identify the placenta and all major fetal parts.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

This table clarifies that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 3, 4, 5, 6, 7, 8, and 9) of abortion by dilation and evacuation" and there weren't significance differences among all studied hospitals. Also it presents again that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 3, 4, 5, 6, 7, 8, 9) which related to "Second-Trimester Induction Abortion" and there weren't significance differences among all studied hospitals.

**Table6: Frequency distribution of observational practice among studied Mansoura governmental Hospitals regarding (Analgesia and Sedation).**

Item	Number of Standard	Health insurance N=14				International N=10				Old general N=8				Chi square test	
		Done		Not done		Done		Not done		Done		Not done		X2	p
		N	%	N	%	N	%	n	%	n	%	n	%		
11. Analgesia And Sedation	Sd1. When minimal, moderate, deep sedation or general anesthesia is to be given, patients must be given information about the risks, benefits, and side effects of the medications to be used.	14	100	0	0	3	30	7	70	0	0	8	100	23.567	<0.001**
	Sd2.Prior to moderate sedation, a pre-sedation evaluation of the patient must take place.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.No additional evaluation is needed prior to Para Cervical block and/or NSAID administration.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd4.The supervising practitioner must be immediately available when sedation is Administered.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd5.The cervix should be appropriately dilated for the gestational age.	14	100	0	0	3	30	7	70	0	0	8	100	23.567	<0.001**
	Sd6.The potential need for intravenous access must be considered prior to administering any level of sedation.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd7.Pulse oximetry, with appropriate alarms, must be employed when moderate or Deeper levels of sedation are used.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd8.When sedation is provided, monitoring must be adequate to detect the respiratory, cardiovascular, and neurological effects of the drugs being administered, and this monitoring must be documented.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd9.Supplemental oxygen must be used with deep sedation and general anesthesia.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

Sd10. When moderate sedation or deeper is provided, a person other than the clinician performing the procedure, and who is trained to monitor appropriate Physiological parameters must be present. This person must not be performing Duties other than monitoring the patient.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
Sd11. The practitioner administering deep sedation or general anesthesia must not be the practitioner performing the abortion.	1	7.1	13	92.9	10	100	0	0	8	100	0	0	28.15	<0.001**
Sd12. Any individual responsible for administering, a patient receiving any level of sedation (BLS) certification.	1	7.1	13	92.9	0	0	10	100	0	0	8	100	1.327	0.515
Sd13. When moderate sedation is administered, there should be at least one individual with documented airway skills in the procedure room.	2	14.3	12	85.7	10	100	0	0	8	100	0	0	24.686	<0.001**
Sd14. The practitioner administering deep sedation or general anesthesia must adhere to established professional standards of care.	0	0	14	100	7	70	3	30	8	100	0	0	23.567	<0.001**
Sd15. N2O must be self-administered by the patient or by a qualified anesthesia provider.	1	7.1	13	92.9	0	0	10	100	0	0	8	100	1.327	0.515
Sd16. The provision of N2O must follow guidelines for patient monitoring for moderate sedation.	0	0	14	100	0	0	10	100	0	0	8	100	0	1.000
Sd17. Equipment for the delivery of N2O/O2 must: (a) Provide a concentration of N2O of no more than 70% inspired. (b) Provide a minimum of 30% O2. (c) Be checked and calibrated regularly.	12	85.7	2	14.3	0	0	10	100	0	0	8	100	24.686	<0.001**
Sd18. Functioning equipment and current medications must be available on-site to handle medical emergencies	12	85.7	2	14.3	1	10	9	90	0	0	8	100	21.162	<0.001**
Sd19. In settings where benzodiazepines and opioids are used, appropriate antagonists, bronchodilators, and bag-valve masks capable of delivering supplemental oxygen must be available.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
Sd20. In settings where deep sedation and general anesthesia are used, it is expected that providers maintain the appropriate medication and equipment required for an anesthesia emergency.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

This table shows that more than half of standard criteria competent achieved (100%) by all studied hospitals regarding analgesia and sedation. Also there were highly significant difference among studied hospitals regarding standard (1, 5, 11,13,14,17 and 18).

**Table7: Frequency distribution of observational practice among studied Mansoura governmental hospitals regarding (Use of antibiotics in abortion& Complications: Bleeding, complication: perforation & post procedure care& emergency procedures & evaluation of evacuated uterine contents).**

Item	Number of Standard	Health insurance N=14		International N=10		Old general N=8		Chi square test	
		Done	Not done	Done	Not	Done	Not done		

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

								done						X2	P
		N	%	N	%	N	%	n	%	N	%	n	%		
12. Use Of Antibiotics In Abortion	Sd1.Routine antibiotic prophylaxis must be used for surgical abortion.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.Diagnosed infection must be appropriately treated.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
13. Complications: Bleeding	Sd1.All facilities must have a protocol for the management of acute hemorrhage.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.The following items must be included in the protocol: (1) Establishment of intravenous access (2) Administration of uterotonics. (3) Evaluation of the cause and/or source of bleeding. (4) Defined staff roles. (5) Emergency supplies that will be readily available. (6) Methods for conducting a hospital transfer, if the bleeding does not respond to therapeutic measures or if the patient is hemodynamic ally unstable.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.The facility must have at least two uterotonics and/or mechanical methods of controlling bleeding.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
14. Complication: Perforation	Sd1.If in the clinician's judgment, an instrument passes farther than expected, then uterine perforation must be considered.	14	100	0	0	7	70	3	30	8	100	0	0	7.283	0.026**
	Sd2.If a perforation occurs, even if the patient is asymptomatic, close observation and follow-up must be done, according to the facility's established protocol.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.The patient must be hospitalized for definitive care if: (a) Intra-abdominal viscera are detected in the uterine cavity, cervix, vagina, suction tubing, or on tissue examination. (b) Fetal parts are detected in the abdominal cavity. (c) Expanding intra-abdominal or retroperitoneal hematoma is detected. (d) Hemodynamic instability is present.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
15. Post-Procedure Care	Sd1.All patients must be continuously observed during the recovery period by a health care worker trained in post-procedure care.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.Patients who received sedation or exhibit signs of instability should remain in the care of an appropriately trained individual until no longer at risk for	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

	Hemodynamic instability or respiratory depression.														
	Sd3.A clinician must remain in the facility until all patients are medically stable.	1	7.1	13	92.9	0	0	1	100	0	0	8	100	1.327	0.515
	Sd4.The following criteria must be documented prior to discharge: the patient must be ambulatory with a stable blood pressure and pulse, and bleeding and pain must be controlled.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd5.The patient must be given oral and written instructions outlining what to expect post-procedure, self-care, and signs and symptoms of complications.	0	0	14	100	7	70	3	30	8	100	0	0	23.567	<0.001* **
	Sd6.The facility must provide an emergency contact service on a 24-hour basis, where calls are triaged in accordance with written policies. A recorded message alone is unacceptable.	0	0	14	100	0	0	1	100	0	0	8	100	0	1.000
	Sd7.Any non-clinician involved with first-call triage must be trained to take a post abortion Health history and follow clear written guidelines indicating when Immediate consultation with a clinician is indicated.	13	92.9	1	7.1	0	0	1	100	0	0	8	100	28.15	<0.001* **
	Sd8.Any patient who gives a history suggestive of a post-procedure complication must have access to a clinician. The facility must establish a pathway for physician referral if indicated.	1	7.1	13	92.9	2	20	8	80	0	0	8	100	21.846	<0.001* **
16.	Emergency Procedures														
	Sd1.When abortion procedures are being performed, at least one medical staff member with health care provider level basic life support (BLS) training must be present.	14	100	0	0	0	0	1	100	0	0	8	100	32.00	<0.001* *
	Sd2.Protocols for the management of medical emergencies must be in place. These protocols must include indications for emergency transport and written, readily available directions for contacting external emergency assistance (e.g., an Ambulance).	0	0	14	100	10	100	0	0	8	100	0	0	32.00	<0.001* *
17.	Evaluation Of Evacuated Uterine Contents														
	Sd1.Termination of pregnancy must be confirmed prior to the woman leaving the Facility or further evaluation must be initiated.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd2.When insufficient tissue or incomplete products of conception are obtained, the patient must be re-evaluated.	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000
	Sd3.If insufficient tissue is present after adequate patient evaluation, ectopic pregnancy must be	14	100	0	0	10	100	0	0	8	100	0	0	0	1.000

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

considered, and the patient must be informed of symptoms and dangers of ectopic pregnancy.														
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

This table presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2) which related to "Use of Antibiotics in Abortion" and there weren't significance differences among all studied hospitals. Also this table presents again that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, and 3) which related to " Complications: Bleeding " and there weren't significance differences among all studied hospitals. This table shows that the health insurance hospital &the old general hospital were competent achieved (100%) all criteria of standard (1, 2, and3) while the international hospital was competent achieved (70%) all criteria of standard (1) which related to " Complication: Perforation " and there was significance differences among all studied hospitals (P=0.026) regarding standard 1.And also This table presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 4) which related to "Post-Procedure Care" and there weren't significance differences among all studied hospitals. Also the same result found in the old general hospital regarding to standard 5and there was highly significance differences regarding to standard 5(P<0.001).

Also this table presents that the old general hospital & the international hospital hadn't achieved (100%) and the health insurance hospital was competent achieved(92.9%) all criteria of standard (7) which related to "Post-Procedure Care" and there were highly significance differences among all studied hospitals (P<0.001). While, on the opposite side the studied hospitals were not achieved (100%) of standard 6, also the majority give near to this result regarding standard 3,8 of post procedure and there was highly significance differences regarding to standard 8(P<0.001). This table illustrates that the health insurance hospital was competent achieved (100%) and the other hospitals hadn't achieved(100%) all criteria of standard (1) which related to "Emergency Procedures" and there were highly significance differences among all studied hospitals (P<0.001\*\*). Also the international hospital and the old general hospital were competent achieved (100%) &while the health insurance hadn't achieved (100%) all criteria of standard (2) which related to "Emergency Procedures" and there were highly significance differences among all studied hospitals (P<0.001\*\*). The table presents that all studied hospitals were competent achieved (100%) all criteria of standard (1, 2, 3) which related to ". Evaluation of Evacuated Uterine Contents "and there weren't significance differences among all studied hospitals.

**Table 8: The mean score and standard deviation of the standards among the nurses in the health insurance, international and old general hospitals.**

**Table8 shows results related to the total mean score and standard deviation of achievement among studied hospitals regarding for abortion performance standard.**

	n of items	Health insurance	International	Old general	ANOVA test	
		Mean ±SD	Mean ±SD	Mean ±SD	F	P
S1: Who can provide abortion	2	2 ±0	2.3 ±0.48	2 ±0	4.272	0.024*
S2: Patient Education, Counseling and Informed Consent	6	8 ±0	7.8 ±0.79	8 ±0	0.712	0.499
S3: Infection Prevention And Control	3	3 ±0	3.1 ±0.32	3 ±0	1.108	0.344
S4: RH Testing And RH Immunoglobulin Administration	5	6.86 ±0.53	5 ±0	5 ±0	106.031	<0.001**
S5: Limited Sonography In Abortion Care	15	17 ±0.78	19.7 ±0.95	20.25 ±1.98	23.153	<0.001**
S6: Early Medical Abortion	11	14.86 ±0.36	16.1 ±1.52	17 ±0	15.936	<0.001**
S7: First- Trimester Surgical Abortion	10	10.86 ±0.36	11.5 ±0.85	12 ±0	12.364	<0.001**
S8: Management Of Pregnancy Of Uncertain Location	8	8 ±0	8 ±0	8 ±0	-	-
S9: Abortion By Dilation And Evacuation	9	9 ±0	9 ±0	9 ±0	-	-

*Comparison Between Nursing Performance And Standard Of Care For Aborted Woman At Mansoura*

S10: Second-Trimester Induction Abortion	9	9 ±0	9 ±0	9 ±0	-	-
S11: Analgesia And Sedation	22	28.21 ±0.58	29.9 ±0.32	30 ±0	65.142	<0.001**
S12: Use Of Antibiotics In Abortion	2	2 ±0	2 ±0	2 ±0	-	-
S13: Complications: Bleeding	8	8 ±0	8 ±0	8 ±0	-	-
S14: Complications: perforation	6	6 ±0	6 ±0	6 ±0	4.272	0.024*
S15: Post-Procedure Care	8	11.93 ±0.47	12.1 ±0.32	12 ±0	0.649	0.530
S16: Emergency Procedures	3	4 ±0	4 ±0	4 ±0	-	-
S17: Evaluation Of Evacuated Uterine Contents	2	2 ±0	2 ±0	2 ±0	-	-
Total	129	150.71 ±0.91	155.8 ±2.29	157.25 ±1.98	45.195	<0.001**

From the table it can be noted that old general Hospital was achieved a higher mean score and standard deviation 157.25 ±1.98 among all studied hospitals. Also from the table, it can be seen that, there were highly significance differences (P<0.001\*\*) among all studied hospitals.

### III. Discussion:

The current study aimed to compare between nursing performance and standard of care for aborted woman at Mansoura governmental hospitals. Concerning to the research question (Are health care provider's practices for management of abortion at Mansoura governmental hospitals consistency with performance standards for abortion?).The result was significantly support to answer of research question. In relation to item one which related to "Who can provide abortion" the findings of present study shows that nurses in the health insurance & the old general hospital were competent achieved all standards. These findings may be due to the experiences and the knowledge of health care providers. These findings are consistent **with Berer, (2009)** who confirmed the similar result that experience of the individual permit to provide competent care also it is safe and beneficial for suitably trained mid-level health-care providers to provide first-trimester vacuum aspiration and medical abortions and to treat incomplete abortions.

According to the current study in relation to item two which related to "Patient education, counselling and informed consent" The findings of present study about nurses showed that, the all studied hospitals were competent achieved most of standard among the health insurance and old general hospital. While there wasn't performance to standard 2(there must be documentation that the patient affirms that she understands the procedure....) and standard 6(all reasonable precautions must be taken to ensure patient confidentiality) which related to patient education, counselling and informed consent" this may be due to the hospital policy in managing abortion and the rest of studied hospitals had emergency admission which characterized by caseload long time all over the hot days.

Concerning item three which related to "Infection prevention and control" The findings of current study highlighted nurses presented that, all studied hospitals were competent achieved all standard except the new general hospital was achieved most of all criteria of standard one (proper engineering and work practice controls should be in place to reduce exposure of patient.....) for nursing staff. This results may be due to the nurses follow up the infection controls plan and also presence of more round and frequent supervision about infection control committee.

These findings were in the same line to **Hussein et al., (2011)** who has highlighted classes related to infection manage and maternal mortality reduction. First, despite restricted proof on powerful contamination manage measures at some stage in abortion and shipping and from low aid settings, it seems that education, organizational change and satisfactory development interventions have to be delivered, confirming the want for a health structures method to lessen maternal mortality, in particular on the subject of sepsis. Second is the need to enhance our information of organizational and behavioral trade to efficaciously implement contamination manage measures?

While these findings were in contrast with **Friday et al., (2012)** Who reported that the results of this study suggest the need for improved record-keeping procedures, the development of appropriate policies and protocols for infection control and staff training on infection control in maternity care facilities in Edo State.

Concerning item four which related to "Rh testing and Rh immunoglobulin Administration ", the nurses at all studied hospitals were competent achieved standard (1, 2, 3, 4) except the health insurance hospital weren't achieved standard (4) (documentation of other arrangement for administration) and there was highly significance differences among all studied hospitals. This findings may be as a result of international policy for each hospital and it is very important issue for the mother and the baby. These result are consistent with **Fung et al., (2003)** who reported that the results of study suggest decreased incidence of Rh alloimmunization and reduced practice variation with regards to immunoprophylaxis strategies in Canadian women.

Concerning item five which related to "Limited Sonography in Abortion care ", nurses at all studied hospitals were achieved standard (3, 5, 6) and there was no highly significance differences among all studied hospitals, these result are consistent with **Pricilla et al., (2014)** Who found that, it is useful to use obstetric ultrasound in the early detection of missed abortions and twin pregnancies, and enables appropriate treatment of post-term pregnancies in situations where women do not forget the last menstrual period. It is possible to get good results by adequate training of a generalist physician in obstetric ultrasound. This training needs to be defined and have national quality assurance.

In addition all studied hospitals hadn't achieved standard (1, 2, 4, 7, 8) and there were highly significance differences among all studied hospitals regarding to standard (1, 2, 4). These result because each hospital has special policy, there are lack of training in obstetric ultrasound training program me and over load of cases, also poor provision about infection control.

As regards to item six which related to "Early medical abortion" the results of the current study about nurses showed that all studied hospitals were achieved more than half of the standard which related to "Early medical abortion" there was highly significance differences among all studied hospitals. These findings in agreement with **Ian et al., (2010)** who mentioned that complications of first-trimester abortion care rates in family medicine clinical sites were very little and within the same rate available for obstetrics-gynecology and specialty abortion sites, expect the missed ectopic pregnancy, expected complications were treated by family physicians through their practice without support from emergency services or those of specialists. Quality improvement systems and clinical protocols that decrease the danger of missed ectopic pregnancy are vital to early abortion care. This study confirms the safety and efficacy of early abortion care by family physicians. In addition family physicians who offer abortion care promote continuity of care and the patient-centered medical home and may help to reduce abortion provider shortages across the United States more over it is done to safe mother health so it can be reduced maternal mortality.

Concerning item seven which related to "First Trimester Surgical Abortion" the present study presented that all studied hospitals completely achieved all standards except standard 6 and 10, this may due to hospital policy in managing abortion and there was highly significance differences among all studied hospitals, regarding to standard 6. These findings are consistent with **Lyus et al.,(2009)**, who found that, Manual Vacuum Aspiration( MVA) for first-trimester abortion is safe and effective. There are several published reports of MVA abortion being successfully incorporated into established primary care practices and family medicine residency training programs. Incorporating MVA abortion care into primary care settings offers improved continuity of care and fosters the goals of the Future of Family Medicine Project, which strives to create a medical home where a "basket of services" is offered to patients.

Also these result is consistent with **Jana et al., (2011)** who found that management of first trimester pregnancy loss should be firstly included the wishes of the well-informed patient. Expectant or medical management may be useful for hemodynamically stable women with incomplete pregnancy loss. Surgical management should be done in patients who choose it firstly and in those with failed expectant medical management. MVA particularly when performed in the office setting, is less costly and more efficient than EVA in the operating room, but maintains equal or improved safety and efficacy. The addition of ultrasound guidance and antibiotic prophylaxis has been shown to decrease operative complications for either operative approach.

Also these result is consistent with **Alia and Hasan, (2013)** who found that with appropriate procedure training, surgical evacuation of the uterus for the first trimester missed abortion is being associated with low rate of complications, shorter evacuation time, and therefore a shorter length of hospital stay. The procedure seems more suitable for a woman who does not wish to undergo labor discomfort too early.

Concerning item eight which related to "Management of pregnancy of uncertain location" (PUL) nurses at all studied hospitals were competent achieved all standard and there was no significance differences among all studied hospitals, in which consistent with **Journal Turkish German Gynecology Association, 2013** which found that, the rate of pregnancy of uncertain location occurrence has increased with the increase in the number of early pregnancy units. So, it is important to follow-up the patients diagnosed with PUL until the final diagnosis is concluded. Though the best method for predicting ectopic pregnancy in patients with PUL is the HCG ratio, progesterone is the best indicator for viability. In addition it is consistent with **Sagili and Mohamed, (2008)** who found that asymptomatic pregnancy of unknown location should be managed conservatively as none of the methods to predict the clinical outcome of PUL is 100% accurate. It is advisable to

follow up with HCG and transvaginal ultrasound assessments until the pregnancy is located accurately or intervention becomes necessary. Identified ectopic pregnancy should be managed according to local guidelines. Medical management is reserved for women with asymptomatic persisting PUL. Surgery is indicated if the woman is symptomatic at presentation or during subsequent expectant management.

Concerning item nine which related to "Abortion by dilation and evacuation" the results of the current study about nurses showed that all studied hospitals were competent achieved all standard of abortion care and there weren't significance differences among all studied hospitals. This results may be because it is hospital policy guide line for abortion management.

Concerning item ten which related to "Second trimester induction abortion" the results of the current study about nurses showed that all studied hospitals were competent achieved all standard of abortion care and there weren't significance differences among all studied hospitals, in which consistent with **Nagaria and Sirmor,(2012)** who found that the second trimester termination of the pregnancy by using combination of mifepristone and misoprostol is a safe, noninvasive, most cost effective method with a high success rate a short induction abortion interval(IAI). Pre-treatment with mifepristone adds to the effectiveness of the misoprostol as an abortifacient. In addition it is consistent with **Drezett et al., (2014)** who found that it was effective and safe to induce abortion in pregnancies by following protocol analysis of misoprostol. Also it is consistent with **Patel et al., (2013)** that they found that mifepristone followed by misoprostol was more effective and has a shorter IAI and fewer side effects

In addition to second trimester induction abortion is performed may be as related to medical problems or previous history this is go in the same line with **Mulat et al., (2015)** who found that although the availability of safe first trimester abortion services, the incidence of induced second trimester abortion is high. Different delaying factors were preventing the women from getting early abortion services. Women who had faced problems related to logistics, women from rural residence, women who are unable to recognize their pregnancy early, and irregular nature of their menses were found to have an abortion in the second trimester period.

As regards to item eleven which related to "Analgesia and sedation" the current study results showed that more than half of standards were competent achieved by all studied hospitals and there was highly significance differences among all studied hospitals regarding to standards (1,5,11,13,14,17,18). This results may be due to lack of hospitals resources& facilities and lack of health care provider's knowledge and experiences. These findings in agreement with **Ellen et al.,(2012)** who found that there is no complication related to low dose procedural sedation in over 47.000 consecutive non fasting patients who have abortion through 18weeks gestation eliminating the requirements to abortion would decrease stress and unpleasant symptoms without increase in the anesthesia related complication for woman having abortion.

As regards to, item twelve which related to "Use of antibiotics in abortion" the current study results showed that the all studied hospitals were competent achieved all standards and there weren't significance differences among all studied hospitals. This results may be because it is hospital policy and to reduce post abortion infection and complication. These findings in contrast with **Ricardo et al., (2011)** who mentioned that antibiotics may not be essential after 48 hours of clinical improvement. Also these result is in agreement with **The Cochrane Collaboration, (2012)**, who found that it is necessary to offer antibiotic prophylaxis at the first trimester surgical abortion is effective in preventing post-aborted upper genital tract infection. Evidence between trial heterogeneity suggests that the effect might not apply to all settings, population groups or interventions.

In addition to the result is in agreement with **Wendy, (2012)** who reported that antibiotic prophylaxis prior to surgical abortion using universal metronidazole, with selective azithromycin for women meeting criteria for a higher risk of infection, was associated with a low rate of postoperative infection among those for whom follow-up information is available. This regimen offers the advantages of observed single-dose treatment. Prospective evaluation including outcome assessment for a higher proportion of the study population is warranted. As regards to, item thirteen which related to "complications: bleeding" the current study results of nurses showed that the all studied hospitals were competent achieved all standard and there weren't significance differences among all studied hospitals. This results may be because years of experiences and hospital policy of abortion complication management.

As regards to, item fourteen which related to "complications: perforation" the current study results of nurses showed that the all studied hospitals were achieved all standard and there was significance differences among all studied hospitals. This results may be related to hospital policy for abortion complication management and complains of nurses with hospital policy.

As regards to, item fifteen which related to "Post procedure of care" the current study results showed that the all studied hospitals were competent achieved less than half of standard. Also, there was highly significance differences among all studied hospitals regarding to standard (5, 7). These result is due to decrease the capacity of healthcare providers to deliver post abortion care and also due to decrease post abortion care health education programme. These findings in agreement with **Arambepola et al., (2014)** who mentioned that

although equitable emergency treatment of post-abortion complications, there were deficiencies with regards to provision of post-abortion counselling, education and family planning services among women seeking hospital care following unsafe abortion. Their dissatisfaction on the care during hospital stay was largely related to discrimination by care-providers based on their abortion status. Integration with the public health network was inadequate with no mechanism for follow-up care.

These findings in agreement with **Ansari et al., (2015)** who mentioned while designated emergency obstetric facilities in Afghanistan generally have most of the supplies and equipment needed for post abortion care, this study shows that the capacity of healthcare providers to deliver post abortion care is limited.

Also these result is in consistent with **Tesfaye and Oljira, (2013)** who found that the interaction of patients and service providers was satisfactory. However, from a clinical service delivery stand point, important medical information on danger signs, follow-up needs of post abortion clients and care associated pain management were neglected by most of the health professionals. Almost all of the health facilities had basic and appropriate medical equipment and supplies required for providing post abortion services. A majority of the service providers have taken training that is not up to date and focus on general management of post abortion management clients. Also it is in the same line with **Demtsu et al., (2014)** who found that patient satisfaction is little in addition when providing counseling and reassuring clients, there is refreshments trainings shortage and there are shortage of materials and supplements. This all could have synergetic effect on compromising the quality of post abortion management.

As regards to item sixteen which related to "Emergency procedures" the current study results about nurses showed that the international & old general hospital weren't achieved standard one and there were highly significance differences among all studied hospitals. These result is due to lack of health care providers' knowledge and experiences about basic life support. These findings in consistent with **Roshana et al., (2012)** who mentioned that, there is in our center adequate knowledge in cardio pulmonary resuscitation & basic life support (CPR/BLS) which should be addressed promptly. There is need for all health care professionals to have some standard of CPR/BLS training and assessment because of CPR training and clinical exposure influence the retention of knowledge. Also the current study results about nurses showed that the international & old general hospital were achieved standard (2) and there were highly significance differences among all studied hospitals. These result is because it is hospital policy for emergency management.

Finally as regards to item seventeen which related to "Evaluation of evacuated uterine contents" the nurses showed that the all studied hospitals were competent achieved all standard and there weren't significance differences among all studied hospitals. This result due to Egyptian Muslim culture legal abortion not done until it confirmed by health care provider and if needed further evaluation it done. These findings in line with **Ali, (2014)** who mentioned that, the cost of histopathological examinations and the low incidence of molar pregnancies in Saudi Arabia, he can say it may not appear reasonable to perform these examinations routinely after all first-trimester miscarriage. he recommend that histopathological examination be performed in select instances: when the diagnosis is uncertain preoperatively, when fewer tissues than expected have been obtained, when ultrasound suggests a molar pregnancy, when patients are considered of high risk for trophoblastic disease, or when inspection during surgery suggests unexpected pathology.

#### **IV. Conclusion**

In the light of the present study results, it can be conclude that, high standards of achievements among all studied governmental hospitals at Mansoura City. It can be seen that the current practices of nurses for abortion were highly achieved the performance standards for abortion published by NAF 2014. It is clear that the old general hospital was achieved a higher mean score and standard deviation  $9.13 \pm 0.35$  among all studied hospitals.

#### **V. Recommendation**

Strengthen pre-service education of all health care providers to ensure competency-based approaches that lead to stronger performance and update knowledge and skills as well as evidence-based practices that meet the priority health care needs of Egypt. Increasing awareness of health care providers regarding infection control during using ultrasound. Designing and implementing programmes regarding basic life support.

#### **Reference**

- [1] Grimes DA, Stuart G, (2010): Abortion jabberwocky: the need for better terminology. *Contraception*. Feb; 81(2):93-6.
- [2] Hassan EO, El-Sonbaty S, El-Ayat A, et al, (2005): A Situational Analysis on Abortion in Egypt: Egypt Demographic and Health survey. Regional office for Eastern Mediterranean, WHO.
- [3] Nagaria T and Sirmor N, (2012): Misoprostol Vs Mifepristone and Misoprostol in Second Trimester Termination of Pregnancy: *Journal Obstetric Gynecology India*. Volume; 61(6) Pp: 659–662.
- [4] Shrestha Roshana, Batajoo KH, Piryani RM, and Sharma MW, (2012): Basic life support: knowledge and attitude of medical/paramedical professionals: *World Journal of Emergency Medicine*. 3(2): 141–145.

- [5] Drezetta J, Misrelma M, (2014): Misoprostol for induction of second trimester abortion in pregnancies resulting from sexual violence: effectiveness analysis of a protocol applied in the Brazilian public health service. 29(3): 105–111.
- [6] Mulat A, Bayu H, Mellie H, and Alemu A, (2015): Induced Second Trimester Abortion and Associated Factors in Amhara Region Referral Hospitals, *BioMed Research International* Volume 2015, 6 pages.
- [7] Savaris R F, De Moraes G S, Cristovam R A and Daniel R, (2011): Are antibiotics necessary after 48 hours of improvement in infected/septic abortions? A randomized controlled trial followed by a cohort study. 204(4): 301.e1–301.e5.
- [8] Ansari N, Zainullah P, Mi Kim Y, Tappis H and et., (2015): Assessing post-abortion care in health facilities in Afghanistan: a cross-sectional study. *BMC Pregnancy and Childbirth* 15:6.
- [9] Tesfaye G and Oljira L, (2013): Post abortion care quality status in health facilities of Guraghe zone, Ethiopia
- [10] Shuaib A.A, and Alharazi A H, (2013): Medical versus surgical termination of the first trimester missed miscarriage. *Alexandria Journal of Medicine*. 49(1): 13–16.
- [11] Allison J L, Sherwood R S, and Schust D J, (2011): Management of First Trimester Pregnancy Loss Can Be Safely Moved Into the Office. *Reviews in Obstetrics Gynecology*. 4(1): 5–14.
- [12] The Cochrane Collaboration, (2012): Antibiotic prophylaxis for first trimester induced abortion, Issue 3. Art No: CD005217.
- [13] Norman W V, (2012): Metronidazole Prophylaxis before Surgical Abortion: Retrospective Review of 51 330 Cases. Volume 34, Issue 7, Pages 648–652.
- [14] Alsibiani SH A, (2014): Evaluation of evacuated uterine contents. *BioMed Research International*. 2014 (2014): 5. Research Article, Value of Histopathologic Examination of Uterine Products after First-Trimester Miscarriage.
- [15] Hussein J, Mavalankar D V, Sharma SH, and D'Ambruso L, (2011): A review of health system infection control measures in developing countries: what can be learned to reduce maternal mortality, *Global Health*. 7(14). *BioMed Central*.
- [16] Friday O, Edoja O, Osasu A and Chinenye N, et al., (2012): Assessment of infection control practices in maternity units in Southern Nigeria, *International Journal for Quality in Health Care*. 634-640, published by Oxford University Press in association with the International Society for Quality in Health Care.
- [17] Rajapaksa L C, Galwaduge CH and Arambepola C, (2014): Usual hospital care versus post-abortion care for women with unsafe abortion: a case control study from Sri Lanka, *BMC Health Services Research*. 14 (470).
- [18] Fung Kee Fung K, Eason E, Crane J and Armson A, et al., (2003): Prevention of Rh alloimmunization. *J Obstet Gynaecol Can. Sep*; 25(9):765-73.
- [19] Pricillia A R, Vasandhi K, Parveen S and Sankarapandian V, et al., (2014): Introduction of Routine Obstetric Ultrasound in an Urban Health Center: Results and Benefits. *Journal of Medical Ultrasound*. 22(4): 218–221.
- [20] Berer M, (2009). Provision of abortion by mid-level providers: international policy, practice and perspectives. *Bulletin of the World Health Organization*; 87:58-63.
- [21] Bennett I M, Baylson M, Kalkstein K and Gillespie G, et al., (2009): Early Abortion in Family Medicine: Clinical Outcomes, *Annals of Family Medicine*. Nov; 7(6): 527–533.
- [22] Erdman J N, Grenon A, and Wilson L H, (2008): Medication Abortion in Canada: A Right-to-Health Perspective, *American Journal Public Health association*. October; 98(10): 1764–1769.
- [23] Lyus J R, Gianutsos P and Gold M, (2008): First Trimester Procedural Abortion in Family Medicine. *Articles from American Journal of Public Health are provided here courtesy of American Public Health*.
- [24] *Journal Turkish German Gynecological Association*, (2013). 14(2): 104–108.
- [25] Allison L J, Sherwood S R, and Schust J D, (2011): Management of First Trimester Pregnancy Loss Can Be Safely Moved Into the Office. *Reviews in Obstetrics Gynecology*. 4(1): 5–14.
- [26] Sagili H & Mohamed K, (2008): Pregnancy of unknown location: an evidence-based approach to management. 10(40): 224–230.
- [27] Ethar Shalby, 2013: Abortion in Egypt: whose choice? Retrieved from <https://dailynewsegypt.com/abortion-in-egypt-whose-choice>.
- [28] American Nurses Association, 2014: *Nursing informatics: scope and standards of practice*. Second Edition. Silver Spring, nurse books.org. Maryland, 18, 19.
- [29] Pitchforth, Richard J, Lilford B, Yigzaw Kebedec and et al., (2010): Assessing and understanding quality of care in a labour ward: A pilot study combining clinical and social science perspectives in Gondar, Ethiopia, *Social Science & Medicine*. 71 (2010) 1739–1748.
- [30] Freedman L, Battistelli MF, Gerdt C, McLemore M, 2015: Radical or routine? Nurse practitioners, nurse-midwives, and physician assistants as abortion providers. *Report Health Matters*. 23(45):90-2.
- [31] Charlotte Davis, (2014): The importance of professional standards, 4 nursing made Incredibly Easy. available at [www.NursingMadeIncrediblyEasy.com](http://www.NursingMadeIncrediblyEasy.com).
- [32] Wiebe R E, Byczko B, Kaczorowski J, and McLane L A, (2012): Can we safely avoid fasting before abortions with low dose procedural sedation? A retrospective cohort chart review of anesthesia related complications in 47,748 abortions. *Contraception* 87(2013)51\_54. Original research article.
- [33] World Health Organization., 2016: *Standards for improving quality of maternal and newborn care in health facilities*. Number of pages: 84. Geneva, Switzerland.
- [34] College of Registered Nurses of British Columbia, 2013: *Professional standards for registered nurses and nurse practitioners*. Vancouver, Canada.