

# Role of Nurses in the Management of Common Gynecological Diseases: Recent Advances

Hardeep Singh Tuli\*

Department of Biotechnology, Maharishi Markandeshwar (Deemed to be University), Mullana-Ambala 133 207, Haryana, India

\**Corresponding author:* Hardeep Singh Tuli, [hardeep.biotech@gmail.com](mailto:hardeep.biotech@gmail.com)

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**Abstract:** In recent years the role of the specialist nurse with respect to gynecology and women's health has gained significant importance. The advancement in the nursing practice has provided an insight to interact with patients to explore their history. Such hysteroscopy procedures may not only give a better feel to the patient but also explore the need for doctor treatment. The review updates about the ongoing advances in the field of nursing science to upgrade the life of patients with gynecological diseases. Evidence has suggested the promising role of nurses to motivate patients with improved health after the treatment. The present review will cover the various health issues of women including menstrual dysfunction, fertility, and management of pregnancy's termination, uro-gynecological issues, and gyne-oncology, etc. The role of nurses during the above health issue will be discussed via various procedures. Therefore, the present review will conclude the significant importance of nurses in women's health issues to sustain happiness and to strengthen the need to bring advances in the curriculum of nurses to full fill the requirement of medical staff.

**Keywords:** Gynecology; Menstrual problems; Papillomavirus; Fertility issues; Abortion; Cancer

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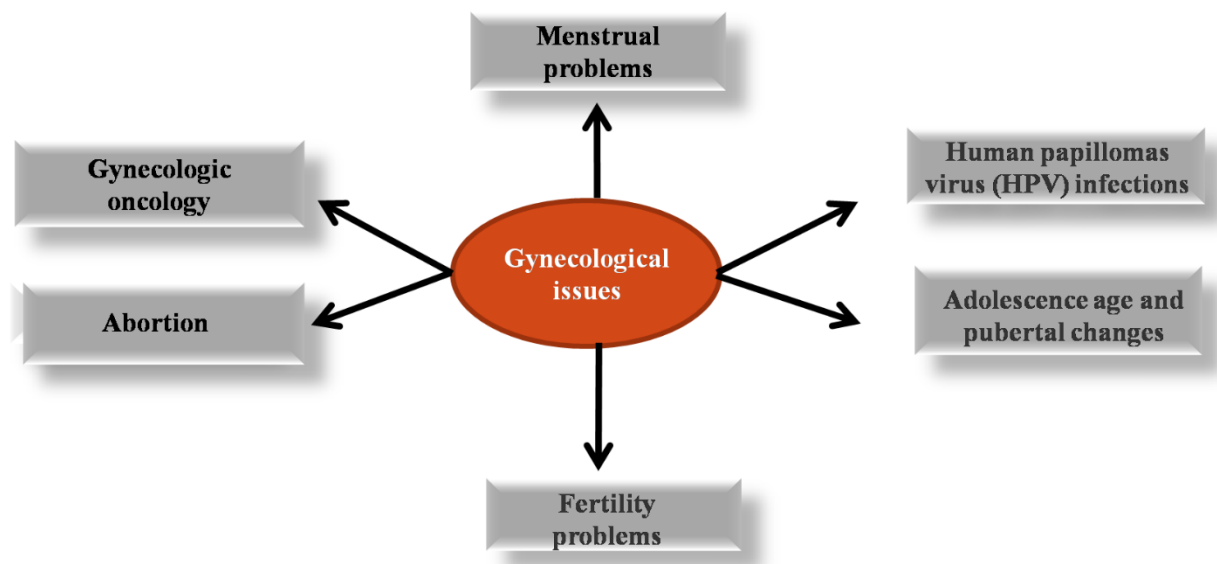
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## 1. Introduction

Nurses are playing a key role to improve women's gynecological issues via medical counseling. In the last decade, the requirement for trained nursing staff has increased significantly. Nurses curriculum has also been revised a lot to empower them with advanced medical practitioner skills<sup>[1-4]</sup>. Such trained practitioner nurses may have expertise (**Figure 1.**) in a diverse range of areas like obstetrics, gynecology, urogynecology, gynecologic oncology, and infertility, etc. Therefore, such practitioner nurses may be appointed at rural primary health care centers to help poor peoples. It has been estimated that out of 44 million health care staff, 21 million corresponds to nurses and midwives<sup>[5-7]</sup>. Therefore, the rate of nurse's occupation is much higher which suggests promising carrier perspective of nurses to full fill the need of patient's healthcare. Recent researches have shown that a woman faces more health issues and frequent visit to hospitals in comparison to men. It has been estimated that all women may face minor /or major gynecological issues in their life. Mostly, the cases are minor and treatable with personal hygienic and medical counseling. However, some of the cases may turn into severe complications and required major surgeries and lifelong medical consultancy.

Therefore, a regular visit to medical centers and proper nursing care can prevent several gynecological health issues. For instance, a nurse practitioner starts a telephonic conversation with women patients with gynecological problems and instructs them if there is an emergency to visit the hospital or not<sup>[8-10]</sup>. The educational skills of nurses ensure to retrieve the necessary information via hysteroscopy investigation to analyze the required test as well as disease diagnosis. Nurses apply a set of necessary questioners to know

sensitive issues including sexual history, contraception, and pregnancy, etc. Nurses are also trained for physical examinations of women patients with gynecological issues [11,12]. Therefore, such gynecological specialist nurses may help women patients a lot to omit their clinical symptoms. The present review is describing the advancement in the nursing profession to combat women's gynecological issues to ensure high-quality care.



**Figure 1.** Immense potential of nurses to deliver in a diverse range of gynecological problems of women.

## 2. Gynecological issues in women

### 2.1. Menstrual problems

Problems in the menstrual cycle are considered to be one of the most common causes of women patients' consultancy [13,14]. Studies described 1 out of 20 women in the age group of 30 to 49 visits medical centers each year due to menstrual cycle issues. Several times it has been seen that women consider heavy menstrual bleeding a normal process. Even they feel embarrassed to discuss such issues socially and tried to manage themselves. During the last decade, this area of women's health has researched a lot and come up with numerous clinical improvements [15,16]. It has been observed that menstrual heavy bleeding issues disturb women's social and emotional relationships. Unregulated release of hormones is found to be associated with heavy bleeding issues in younger age women [17,18]. However, in many cases, fibroids and Polyps of endometrial may also be seen during the hysterectomy of patients. Such pathological issues can only be identified via clinical examinations [19,20]. A woman with a history of heavy menstrual bleeding undergoes physical examination for speculum and abdominal to explore the size of uterus and fibroids. In addition, patients are examined for total blood count and clotting disorders. If patients found with significant menstrual bleeding symptoms, then pharmacological treatment is initiated for up to 3-months. Several drugs including levonorgestrel, Tranexamic acid, mefenamic acid, may be considered to prevent heavy bleeding [21-23].

### 2.2. Human papillomavirus (HPV) infections to women's

HPV is responsible to cause skin warts in the cervix region and known to initiate cervical cancer in women. Out of 100 different types of papillomavirus, 40 are known to infect genital areas [24-26]. They are further divided into two categories including low risk and high risk of cancer-causing virus. HPV- 16 as well HPV 18 is found to be a common cause of cervical cancer. The HPV infection leads to cervical intraepithelial neoplasia or the formation of precancerous outgrowth [27-30]. In 70 % of the cases of women

with HPV viral infections had sexual intercourse history. However, mostly, this infection is self-healed by the body's immune system. Women are further encouraged to regular checkup and colposcopy of their cervix from nurse colposcopist<sup>[31-34]</sup>. Special training courses are being offered to train skilled nurses for such colposcopy testing of women. Such colposcopic examinations provide insights to detect the severity of diseases and infections. In most countries, colposcopy is highly recommended before starting any therapy, and colposcopists instructed to critically examined cytology and histology for accurate diagnosis<sup>[35]</sup>.

### **2.3. Adolescence age and pubertal changes**

Adolescence age is considered to be very important in women's life due to the progression of biological as well social maturity<sup>[36-39]</sup>. Nurses are provided training to help girls of adolescent age to tackle menstrual and congenital problems. During the pubertal time period, a young person develops the growth of secondary sex organs. Prominent growth of breasts is generally seen in young girls during puberty followed by development in other regions. It usually takes 18 months to complete the growth of secondary sex organs<sup>[40]</sup>. Recent studies demonstrated that puberty age is decreasing due to unhealthy lifestyles<sup>[41-43]</sup>. In many countries, the puberty age is decreased and started from 12.3 years instead of 15 years. Experience nurses ask a set of questions to the young girl and try to explore the reason for their visit to the medical center. Nurses are very well aware of the anatomy of adolescent girls and the ongoing changes in their reproductive parts<sup>[44,45]</sup>. For instance, the development changes of the vulva at the time of puberty are noticeable. Experience nurses always take such changes in mind before reaching any diagnostic decision. During medical examination young girls are found to be unfamiliar with the nomenclature of female anatomy and the changes of puberty stage.

### **2.4. Fertility problems**

After one year of marriage women generally try to have a child in their life. In last few decades, it has been observed that couple avoids having parenthood before 35 years. Such delaying in family planning may affect female fertility<sup>[46-49]</sup>. If a couple not able to have a child even after having unprotected sex for more than a year should visit a medical center. There has been a diverse range of infertility reasons including ovulation disorders, fallopian tube, and uterine disorders<sup>[50-52]</sup>. In addition to this, lifestyle-associated and environmental factors may also cause infertility<sup>[53]</sup>. A couple facing problems to have child should decide to move health care centers and agree to go with initial checkups. Involvement of both husband and wife in initial assessment and questioners enable them to pursue the exact investigation and nursing care. Such primary examination and history evaluation not only help to locate risk factors but also explore other hidden causes of infertility. Nurses provide space to the women to gather maximum information to explore infertility reasons<sup>[54-56]</sup>. Nurses are trained to initiate sensitive and private talks including sexually transmitted diseases and abortion with women's to analyze the optimum cause<sup>[57-58]</sup>. Such investigations may identify the need for specialist doctors and further physical examinations.

### **2.5. Early pregnancy issues**

There has been a set of guidelines for nurse practitioners for the early pregnancy unit to must-have clinical coordination and leadership quality. Women's safety should be the ideal goal during early pregnancy circumstances<sup>[59]</sup>. Such skilled nursing practitioner not only helps in effective treatment but also lower down the hospital stay of patients. Basics of embryology revealed the release of oocytes from the ovary and captured by fallopian tubes<sup>[60]</sup>. Fertilization occurs in the ampulla of the fallopian tube which results in the formation of a zygote followed by several cell divisions to form morula and blastula stages. At 5<sup>th</sup> day of fertilization, the blastocyst stage of the embryo moves forward in fallopian tubes and starts to implant in the uterus<sup>[61-62]</sup>. This is the time when blastocyst starts to produce a detectable amount of HCG (human

chorionic gonadotropin) in urine. On the 20<sup>th</sup> day, one can easily find the development of heart pulsation. Bleeding during this period is a time of concern and medical visit for women. They may feel intense pain, stress and be in a panic to investigate their concern about developing fetus [63]. Nurse practitioners try to investigate such cases by interacting with patients in terms of miscarriages. It may be a challenging perspective for nurse practitioners to provide the right guidance and counseling to the women patients suffering from bleeding and pain. Practitioners are suggested to confirm intrauterine pregnancy via transvaginal ultrasound [64-66]. As per the guidelines patient should be examined with full dignity and in the presence of a chaperone. There should not be any language barrier while doing the physical and hysteroscopy examination and a proper language translator should be provided. Early bleeding might be associated with miscarriage therefore it is recommended to evaluate thoroughly for the gynecological history of the patients [67-69]. Statistic's analysis suggests that out of four women one faces miscarriage issues. Such miscarriage incidences have been majorly seen during the initial 12 weeks of pregnancy.

## **2.6. Abortion**

Millions of abortions are carried out each year globally due to several reasons. It has been seen that from the last decade the age profile of women's going for abortion changed a lot. Previously the women with abortion were majorly under the age of 25 but now a day's abortions cases observed with above 30 [70-72]. Ladies who are planning to undergo abortion required significant nursing care. Abortion is required to make lawful by taking the consent of a registered medical doctor. Generally, abortion is done if there's any death or permanent injuries associated with the risk to a pregnant lady. Recent studies have confirmed the significant role of nurses and midwives to handle pre-abortion cases [73,74]. During pre-abortion period, women need a positive environment, and should not feel alone. Such an environment allows women to disclose domestic violence, or sexual assault to further make sure that abortion is essential to conduct [75,76]. In several cases, it has been seen that women are determined for their decision to go with abortion, however, if they unsure then all the options should be discussed.

## **2.7. Menopause**

Menopause is the condition when a women's menstrual cycle ends due to the natural aging process. At this stage, they will not be considered fertile as of loss of follicular activity and ovulation [77,78]. Women possessed six hundred thousand fertile oocytes at the time of puberty but the number decreased significantly during the natural aging process. At the age of 45 years, the majority of women's experiences irregularities in the menstrual cycle and eventually stops ovulation and entered in menopause phase [79]. The complex mechanisms of hormonal action are observed at the time of menopause. For instance, low secretion of estrogen, progesterone, testosterone, follicle-stimulating hormone (FSH), luteinizing hormone (LH) associated with loss of follicular activity [80-82]. In several countries around the 50<sup>th</sup> of the year, women's entered menopause and lost their reproductive life. Women gradually face peri-menopause to post-menopause phases and required regular medical and nursing healthcare [83-84]. Nurses are specially trained to support and understand the signs of menopause in women. Nurses provide briefings to women's patients about psychological and medical treatment strategies such as hormonal therapies to overcome peri and post-menopause phases [85,86]. Surgical menopause is the term where ovaries are removed due to one or several reasons including fibrosis, or tumor. In such cases, symptoms of menopause are found to be very severe towards women's health.

## **2.8. Sexual health of women**

Pleasant and negotiated sex can foster closeness in the relationship and build trust between the couple. It has been considered that satisfying sex life not only enhances fertility but also strengthens mental health.

On the other hand, unhappy sex life may be responsible for stressful life [87-89]. Therefore, it has been essential to improving sexual life to enhance wellbeing in a cost-effective manner. Sexual health needs to be monitored to lower down the sexually transmitted infections, and unintentional pregnancies. The awareness about sexual health and reproductive life is essential to spread at health care and maternity centers. Nurses have been found to play an important role to provide confidential space to the women to share sensitive issues [90-92]. Patients should feel comfortable disclosing ongoing health problems. Nurses are encouraged to give person-centered care to women patients. Studies revealed that sexual health can enhance happiness in a patient's life. However, there should be a balance between sexual health and contraception methodology.

## **2.9. Gynecologic oncology**

Cancer is unorganized growth of cells and considered to be one of the prime causes of mortality each year. Uncontrolled growths of tumors are found to show metastasis and spreading from one site to another. There have been a variety of cancer treatment strategies are available such as chemotherapy, radiotherapy, and surgical procedures [93-95]. Nurses are found to play an important role during cancer treatment of patients. Women who are facing gynecological cancer have to appear for examination in front of a multidisciplinary gynae medical team. At the time of cancer diagnosis, each patient is allocated a skilled nurse practitioner to look after for cancer care, in addition, to support emotionally [96-98]. Such trained nurse practitioners guide the patients towards their financial and psychological worries throughout the treatment journey. Nurses are provided with a set of questioners to explore the physical, spiritual, and social behaviors of the cancer patient to come up with promising cancer care oriented strategy. Such prior information at the time of diagnosis will not only speed up the cancer treatment efficacy but also strengthens patient's trust towards cancer therapies [99,100]. Nurse practitioners have to present the patient's report in multidisciplinary meetings and provides support to gynecology patients. Once treatment procedures of patients are completed, nurse practitioners provide a briefing on recurrence symptoms of the disease and guide them to supervise such signs.

## **3. Conclusion**

Evidence suggested that women required regular counseling and health checkups to avoid serious gynecological disorders. Nurse practitioner guidance may provide an impressive roadmap to the girls to overcome the prickly journey from menarche to menopause and later on. Previous studies strengthen the role of nurses to educate women patients about the phases and consequences of disease and possible management of therapeutic strategies. Nurses are found to play a critical role before and after the patient surgery too. In the present scenario, the scarcity of medical staff in rural areas may be fulfilled up to a certain extent by trained and skilled nurse practitioners. Such gynecological specialist nurses can provide health information to women's patients as per NICE guidelines. Therefore, it is worthy to make nurses an integral part of clinical settings.

## **Disclosure statement**

The author declares no conflict of interest.

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