

Advanced Hysteroscopic Surgery: Quality Assurance in Teaching Hospitals

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ABSTRACT

Advanced hysteroscopic surgery (AHS) is a vitally important technique in the armamentarium for the management of many day-to-day clinical problems, such as menorrhagia, surgical excision of uterine myomata and septa in the management of female infertility, hysteroscopic excision of chronically retained products of conception (placenta accreta), and surgical removal of intramural ectopic pregnancy. In today's climate of accountability, it is necessary that gynecologists take a more active role in assuring the quality of their work. In this article, we discuss the quality assurance system from the point of view of the surgical audit meetings in some of the major teaching hospitals affiliated with the University of Queensland (Brisbane, Queensland, Australia).

Key Words: Advanced hysteroscopic surgery, Quality assurance, Teaching hospitals.

INTRODUCTION

A simple system of realistic, constructive self-criticism may be adopted to continuously improve our methods and techniques and grasp the useful up-to-date developments in a rapidly expanding horizon.^{1,2}

Quality assurance (QA) during AHS often necessitates teamwork that involves, not only medical³⁻⁶ and nursing⁷⁻⁹ expertise working within the sphere of gynecologic endoscopy in an institution, but also incorporates the patient¹⁰⁻¹² and her feedback as a beneficiary of this ongoing process, as well as continuously learning lessons

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from other institutions and different specialities of endoscopic surgery and interchanging national and international experience.¹³⁻¹⁹ Such teamwork is the essence of regular and periodic surgical audit meetings (**Figure 1**).

In fact, QA in endoscopic surgery, and in AHS in particular, is so extensive and ramified that it is not possible to cover all aspects within the constraints of the current article. Nevertheless, we will attempt to discuss some of the important facets that are relevant to the clinical day-to-day surgical practice of the gynecologic endoscopist.

SUGGESTED ELEMENTS OF A QA PROGRAM IN THE OPERATING THEATER

- Patient's personal details (eg, age, parity, body mass index [BMI], previous uterine surgery).
- Time surgeon entered the operating theatre (OT) and time the anaesthesia was started.
- Time operation was started and finished.
- Tracking intrauterine pressure (mm Hg).
- Distension fluid employed (eg, glycine 1.5%/normal saline).
- Volume of distension fluid used (intake/output). This is a vitally important observation throughout and after the procedure, to avoid excessive fluid retention by the patient and possible electrolyte imbalance.
- Any intra-operative complications (eg, uterine perforation, uterine bleeding, or suspicion of visceral injury [intestinal, bladder, or ureteric]). Those suspected injuries should be documented by intra-operative photographs and their management clearly depicted.

It is crucial to develop a transparent and reproducible program that relies on precise medical records about AHS procedures and outcomes. In addition, attending members of nursing staff make their own entries in the patient's records. Accurate entry of data must be adhered to for statistical evaluation. However, occasional missing values cannot be avoided within busy endoscopy units. Nevertheless, these omissions are minimized, with concurrent, but separate, medical and nursing entries in the patient's notes. An effort is made to clarify them as soon as possible after the procedure while the facts are still fresh in the minds of the staff involved. The use of information tech-

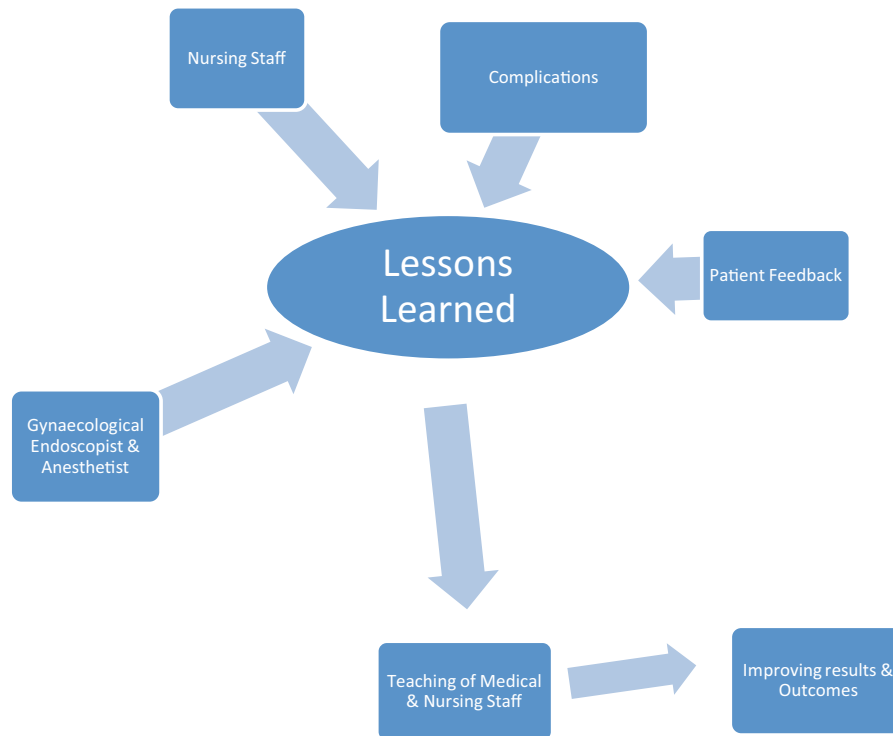


Figure 1. Components of QA in a surgical audit meeting.

nology and computers (which nearly all major units worldwide possess today) to obtain a fast process and reliable data, involving all staff members, is key to the smooth running of quality assessment programs.^{20–25} All preoperative and postoperative details of a patient’s care should be documented, as these are crucial for the surgical audit meetings.

TEACHING PERSPECTIVE

QA includes continuous education and training to improve the quality of endoscopic surgery by eliminating deficiencies.^{2–6}

It is both a professional and legal obligation of gynecologic endoscopy units and major teaching hospitals worldwide to implement a QA program with ready access to a database and QA registers.²⁶ Data entered into quality registers may guarantee a basic standard of documentation of surgical results. This process should be accompanied by intra-operative endoscopic photographs and graphic documentation of case performance, highlighting encouraging points as well as problems and allowing gynecologic surgeons to compare results with those of their peers.^{27–29}

The review of all details within the database at daily, weekly, monthly, and quarterly (3-month) surgical audit meetings is a valuable teaching experience.

PRACTICAL DIFFICULTIES FACING A QA PROGRAM

There are realistic problems that hinder the progress of QA programs and registers.^{30,31} For example, the Nordic experience of QA of gynecologic endoscopic surgery has exemplified that of many institutions worldwide. Of 185 departments surveyed in the Nordic region of the northern hemisphere about the value of QA programs, 168 (90.8%) answered. Most respondents agreed that QA registration is a valuable tool in monitoring outcomes in general gynecologic procedures, in general, and in operative laparoscopic and hysteroscopic operations in particular.

Nevertheless, the lack of both time and resources to carry it out was the main stumbling block.³² This is a real issue within the budget constraints in many public hospitals worldwide and particularly if the QA registration is complex and extensive.^{33,34} Both the endoscopic surgeon and nursing staff are busy accompanying the patient to the postoperative and recovery areas. Recruiting additional

surgeons and nursing staff is not always with hospitals' budgets.

In addition to writing accurate, reproducible, and easily understood endoscopic operation notes (including post-operative instructions pertaining to the patient's care) the surgeon, or the assistant, has to enter the specific data into the register, thus doubling the effort and often causing the initial enthusiasm for the project to decline with the passage of time.

QA INDICATORS FOR AHS

These indicators are varied and may include:

- Methodology of the operation, such as the use of the hysteroscopic resectoscope in hysteroscopic myomectomy of different complexities, as opposed to the employment of the Myosure system (Sony-Distributor AITECH Technology, Darra, Queensland, Australia). The duration of the operation, thus the "TIME (in minutes)" necessary to perform a procedure of similar complexity, as these are important factors pertaining to utilization review (UR) programs concerned with cost effectiveness.
- Unplanned readmission of the patient to the hospital. In this context, it is important to recognize factors outside the surgeon's control, such as readmission of the patient for management of postoperative pain or treatment of comorbidities (eg, uncontrolled diabetes or cardiac problems).³⁵
- Inadequate staffing that could well jeopardize patients' safety. This may be an issue for night shifts, in particular.
- Assessment outcome. These indicators should be addressed at regular meetings with the whole staff involved in medical care of patients undergoing AHS.

As the number of day (outpatient) surgeries increase and more complex operations are performed on an outpatient basis, there is a constant need to maintain our endeavors and constantly improve the quality of gynecologic endoscopic surgical services by strict adherence to a QA program based on continuous constructive self-criticism and aimed at facilitating the delivery of endoscopic surgery to all gynecologic patients, within the available health budget and resources.³⁶⁻³⁹

QA IS TEAMWORK

In our institution, as in many major teaching hospitals worldwide, we consider QA program implementation and maintenance to be a very high priority. It is considered to be part of the risk management process that is an integral

part of clinical surgical practice in general and gynecologic endoscopy in particular. The QA team should not only include the gynecologic endoscopist and his or her nursing support team, but also nonclinicians, such as administrators and bureaucrats, communication with whom is important to clarify the different benchmark criteria as an indication of performance of hospitals, as is the case in Queensland, Australia. Nurses and specialists practicing other branches of surgical endoscopy, family physicians, and biomedical engineers are all welcome to participate actively in these periodic surgical audit meetings where robust discussions take place backed by contemporary international literature to exchange experiences of mutual benefit to the collective departments.⁴⁰⁻⁴² Such communication is highly valuable in reviewing surgical cases and writing observations and recommendations to improve any weak points and minimize complications.

Ideally, major teaching hospitals should have a well-defined and adequately staffed and resourced QA department headed by a clinician gynecologist with a special interest in risk management, to oversee daily problems and iron out unforeseen obstacles to obtain a goal of excellence in gynecologic endoscopic surgery. That is the case at many university-affiliated major teaching hospitals in Brisbane, Australia.

As part of the QA/risk management process, we believe that it is important to fully inform the patient about the implications, preferably with drawings and diagrams that depict the whole process in nonmedical language: Patient information leaflets of the Royal Australian and New Zealand College of Obstetricians and Gynecologists are ideal for that purpose. Written consent forms explaining in full detail the minor and major complications that may occur as a result of an endoscopic procedure are routinely used in our unit.

The aforementioned consent forms were produced by collaborative efforts of clinicians and legal officers to ascertain medicolegal efficacy. It has been argued that detailed information about possible adverse consequences of endoscopic operations may cause a patient anxiety so that she may change her decision regarding undergoing the procedure. However, these concerns were found to be baseless, according to a well-conducted study that showed that greater knowledge of endoscopy improves patients' understanding and satisfaction without inducing increased anxiety.^{43,44}

QA provides collegial feedback and is also a tool for closing the gap between day-to-day clinical practice and evidence-based medicine (EMB).⁴⁵ It has been shown that

medical students can actively participate in a QA program in day-surgery procedures with the advantage of closing the QA loop and adequately preparing for future challenges in their coming years as junior medical officers.^{46–49}

THE ROLE OF EBM IN QA

Patients can be influenced by new techniques in endoscopic surgery,⁵⁰ and at consultation, they often request a specific endoscopic procedure. Relatively new and difficult AHS operations, such as hysteroscopic excision of placenta accreta for women desiring to retain their fertility, would be a favorable approach compared to the traditional surgical option (Hysterectomy). Preparation usually entails an ad hoc surgical audit meeting among the clinicians involved who are prepared with up-to-date knowledge and expertise to treat the condition by hysteroscopic surgery.^{51–54}

Information technology has facilitated access to medical knowledge for women worldwide. On the other hand, hospitals have a professional obligation to meet the challenges of the 21st century by developing a high standard of technology and expertise in performing gynecologic endoscopic surgery.

EBM plays an important role, not only in integrating the proper utilization of limited economical resources and enforcing QA in gynecologic endoscopy, but, also, in conducting a large, prospective, multicenter, multinational, randomized controlled study to establish the exact role of some of the AHS procedures. However, the endoscopist has a professional, ethical, and legal obligation not to perform a procedure that he or she is not adequately trained to perform effectively.^{55,56}

CONCLUSION

An accurate, transparent, and authentic system of QA is pivotal for a beneficial exchange of knowledge and expertise. That, coupled with profession-driven peer review at surgical audit meetings, seems to be an effective tool in promoting QA for the benefits of the patient and institution alike.

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