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A European Society for Gynaecological Endoscopy survey of hysteroscopic practice

Branka Žegura Andrić[1], Milica Perović[2], Eva Timošek Hanželič[1], Mercedes Andeyro Garcia[3], Paolo Casadio[4], Carlo De Angelis[5], Helena Van Kerrebroeck[6], Amerigo Vitagliano[7], Ursula Catena[8]

[1]Department for General Gynaecology and Urogynaecology, University Medical Centre Maribor, Maribor, Slovenia
[2]Department of Obstetrics and Gynaecology, Royal Surrey Hospital, Guilford, United Kingdom
[3]Department of Obstetrics and Gynaecology, Hospital General de Villalba, Madrid, Spain
[4]Division of Gynaecology and Human Reproduction Physiopathology, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
[5]Department of Gynaecological Science and Perinatology, Policlinico Umberto I, University of Rome La Sapienza, Rome, Italy
[6]Department of Obstetrics and Gynaecology, Ghent University Hospital, Ghent, Belgium
[7]Unit of Gynaecology and Obstetrics, Department of Women and Children's Health, University of Padua, Padua, Italy
[8]Department of Women's and Children's Health and Public Health, Agostino Gemelli University Hospital IRCCS, Rome, Italy

ABSTRACT

Background: Hysteroscopy is recognised as the gold standard for diagnosing and treating intrauterine pathologies. Despite its broad acceptance, management practices appear to be diverse.

Objectives: To explore gynaecologists' approaches to managing intrauterine pathologies, assessing their diagnostic habits, therapeutic strategies, and the surgical techniques adopted in clinical practice.

Methods: The project was undertaken by the European Society for Gynaecological Endoscopy (ESGE) Special Interest Group on hysteroscopy. All ESGE members were invited to participate in the study through an online questionnaire hosted on the SurveyMonkey platform.

Main Outcome Measures: Procedural setting, equipment availability, preferred instruments, pain management, and satisfaction with hysteroscopic practices.

Results: Four hundred and fifty-one of 4000 (11.25%) gynaecologists from 57 countries responded. Two hundred eighty one (74%) of the participants performed hysteroscopy using a vaginoscopic approach. Pain management practices varied, with 46% of respondents reporting minimal or no use of analgesics. Procedural settings were distributed across office-based environments 107 (23.7%), outpatient facilities 183 (40.6%), and operating rooms 161 (35.6%). Two hundred and ninety-nine (87.9%) of respondents reported that diagnostic facilities were well-equipped, and 282 (74.4%) expressed satisfaction with the available operative equipment. Polypectomy was the most frequently performed operative procedure.

Conclusions: The observed variability in the practice of hysteroscopy among ESGE members highlights the need for standardised guidelines to improve consistency and patient outcomes.

What is New? This survey provides an overview of the hysteroscopic management of intrauterine pathologies among ESGE members.

Keywords: Hysteroscopy, outpatient, intrauterine pathologies, polyp, survey

Corresponding Author: Žegura Andrić Branka, MD, Department for General Gynaecology and Urogynaecology, University Medical Centre Maribor, Maribor, Slovenia
E-mail: branka.zegura@guest.arnes.si **ORCID ID:** orcid.org/0000-0002-1525-1713
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Introduction

Hysteroscopy is a minimally invasive procedure for examining the uterine cavity and cervical canal and is considered the gold standard for diagnosing and treating intrauterine and intracervical pathologies. It can be performed safely in an outpatient or office setting without general anaesthesia.[1] Hysteroscopy has gained popularity due to its effectiveness, convenience, and reduced recovery time.[2-4]

The concept of "see-and-treat hysteroscopy" refers to performing operative procedures immediately at the time of hysteroscopic diagnosis, rather than scheduling them for a later date.[2,5] This approach allows for a more efficient single-session management of intrauterine pathologies. In addition, the simultaneous use of ultrasound and hysteroscopy has been proposed to enable a "one-stop" diagnostic and therapeutic pathway, which has been implemented in so-called Digital Hysteroscopic Clinics.[2]

Hysteroscopy is generally safe but carries risks such as infection, uterine perforation, bleeding, and pain. Pain levels can vary, making it important to anticipate and apply appropriate pain management strategies. An international consensus that involved the European Society for Gynaecological Endoscopy (ESGE) refers to five hierarchical levels of pain management. Level 1 represents no medication or use of non-sedative oral medication and can include adjuncts such as verbal reassurance, music during procedure and virtual reality prior or during the procedure.[6-8] Level 2 is local anaesthetic to the genital tract. Level 3 is conscious sedation (3a are oral or inhalational medication with sedative effect, 3b are parenteral medication with sedative effect). Level 4 is regional anaesthesia and level 5 general anaesthesia.[1]

For outpatient hysteroscopy, oral non-steroidal anti-inflammatory drugs administered one hour before the procedure is recommended, as they significantly reduce intra- and post-procedural pain. Alternative strategies such as opioids, antispasmodics, transcutaneous electrical nerve stimulation, or inhaled nitrous oxide may also be considered in selected patients.[9-11] Ongoing advancements in hysteroscopic technologies and techniques have expanded the application and safety of outpatient hysteroscopy. Innovations, including smaller instruments and improved imaging can reduce patient discomfort and enhance diagnostic and therapeutic accuracy.[12] Outpatient hysteroscopy through vaginoscopic approach is feasible and better-tolerated, especially in patients with no previous vaginal sexual intercourse.[7,8,13]

Despite its widespread acceptance and recent publication of evidence-based guidance, a range of diagnostic and therapeutic approaches appear to be employed globally.[3,9] We therefore designed a survey to better understand the habits of ESGE member gynaecologists in managing intrauterine pathologies, as well as their familiarity with the available surgical techniques.

Methods

The project received formal approval from the Executive Board of the ESGE. All ESGE members were invited to participate from October 2023 until March 2024. Invitation letters were disseminated to 4000 ESGE members via email, inviting them to participate in the online platform SurveyMonkey (www.surveymonkey.com). The questionnaire included multiple-choice questions covering various aspects, including the background of the procedure, preparation, diagnostic and operative hysteroscopy, pain management, patient feedback, and participant satisfaction with the available equipment. Some questions allowed multiple responses and open specification when applicable. Response options for pain management, healthcare settings, and models of care were standardised according to the international consensus terminology.

The survey questionnaire can be found in the Supplementary Figure 1. No financial incentives were offered to survey participants.

Statistical Analysis

Statistical analysis was performed using IBM SPSS Statistics software (version 25.0, IBM Corp., Armonk, NY, USA). Descriptive statistics were applied to summarize the data, including frequencies and percentages for categorical variables. For items with missing responses, percentages were calculated using the number of respondents who answered the specific question as the denominator rather than the total study population. Continuous variables were expressed as means with standard deviations where appropriate. No inferential statistical tests were conducted, as the primary objective of the study was to provide a descriptive overview of current hysteroscopic practices across ESGE members.

Results

A total of 451 people responded to the survey from 57 different countries (Supplementary Figure 2), including

different continents: Europe, North America, South America, Africa and Asia. This equated to a response rate of 11.25%. 379 respondents from 451 (84%) answered questions regarding their hysteroscopic pre-procedure and procedure practice.

Pre-procedure

Two hundred and fifty-four (67%) respondents offered patient information leaflets, and 347 (91.6%) participants obtained written consent. A minority of respondents, 106 (28%), routinely performed pregnancy tests before procedures in women of reproductive age. Eighty-five (22.4%) respondents reported routinely administering antibiotics perioperatively and 62 (16.4%) respondents used postoperative antibiotic prophylaxis. Pharmacological cervical preparation was offered prior to the procedure by 94 (24.8%) respondents. Two hundred twelve participants (55.9%) provided a standardised report of the procedure with images.

Procedure

Hysteroscopic procedures were performed using a vaginoscopic approach in 281 cases (74%) and approach with speculum in 98 cases (26%). Three hundred forty one (90%) reported that a nurse was always present during the procedure. Ninety (23.7%) respondents reported performing procedures in an office setting, 154 (40.6%) in an outpatient clinic, and 135 (35.6%) in an operating room. Thirty five participants (9.2%) mostly followed an "office" model of care, 245 (64.6%) an "outpatient or ambulatory" model, 35 (9.2%) an "extended recovery" regimen and 64 (16.9%) an "inpatient" model. One hundred sixty seven (44.1%) respondents had access to digital hysteroscopy clinics where the simultaneous use of ultrasound and hysteroscopy was available. Two hundred and ninety-nine (78.9%) respondents were satisfied with the quality of endoscopic imaging technology and 333 (87.9%) reported adequately equipped facilities to perform diagnostic procedures and 282 (74.4%) for operative procedures.

Pain Management

The overall pain control measures are shown in Table 1. For polypectomy, 317 respondents answered the question on pain management with 429 responses provided. Among these, 141 (44.5%) respondents reported not using any medication, 50 (15.7%) used local anaesthesia of the genital tract, 44 (13.9%) used oral or inhalational medications with a sedative effect, 67 (21.1%) used parenteral medications with a sedative effect, 48 (15.1%) used regional anaesthesia, and 79 (24.9%) used general anaesthesia. For myomectomy, 306 gynaecologists responded, yielding a total of 420 responses. Of these, 59 (19.3%) reported using oral non-sedative medication or no medication at all, 38 (12.4%) used local anaesthesia of the genital tract, 43 (14.1%) used oral or inhalational medications with a sedative effect, 68 (22.2%) used parenteral medications with a sedative effect, 83 (27.1%) used regional anaesthesia, and 129 (42.1%) used general anaesthesia.

Diagnostic Hysteroscopy

For diagnostic procedures, 173 (41.7%) hysteroscopists responded to the question regarding the type of the hysteroscope. Of those, 162 of surgeons (93.6%) adopted rigid hysteroscopes, while the remaining 11 (6.4%) used flexible instruments. Among 357 (79.3%) respondents, the most frequent choice of hysteroscope diameter was 4 or 5 mm, used by 175 (49%) surgeons. One hundred twenty three (34.5%) used hysteroscopes thinner than 4 mm and 59 (16.5%) wider than 5 mm. Regarding the optic degree, among 254 respondents (56.3%), 217 of participants (85.4%) used 30° optic, while the rest 37 (14.6%) used 0°optic. Vast majority of 317 (70.3%) respondents, 308 (97.2%), used saline solution as distention medium. Seven (2.2%) used Sorbitol-Mannitol and only 2 respondents (0.6%) used CO_2.

Operative Hysteroscopy

Among 379 respondents (84%), operative hysteroscopy was most often, in 243 surgeons (54.1%) performed in office setting, 76 surgeons (20,1%) offered outpatient setting, while 90 surgeons (23.7%) usually hospitalized their patients. Remaining 8 (2.1%) offered extended recovery setting. As in diagnostic hysteroscopy, among 317 respondents (70.3%), 270 participants (85.2%) used saline solution as distension medium. Forty-six used Sorbitol-Mannitol (14.5%) and 1 used carbon dioxide (0.3%).

Hysteroscopic polypectomy was the most common procedure. Prior to performing polypectomy, 45 (14.2%) participants reported using hormonal therapy to prepare the endometrium. One hundred thirteen participants (35.6 %) performed fewer than 50 polypectomies annually, 104 (32.8%) 50 to 100, 56 (17.7%) 100 to 200 and 44 (13.9%) performed more than 200 polypectomies per year. The preferred instrument for polypectomy was a 4-5 mm hysteroscope with 5 Fr instrument used by 224 (43.2%) of 317 participants that responded (70.3%) to

Table 1. Levels of pain management.

What is the predominant pain management in your hysteroscopic facility?	n	Percentage (%)
Level 1: No medication or use of oral non-sedative medication	145	46
Level 2: Local anaesthetic to the genital tract	31	10
Level 3a: Oral or inhalational medication with sedative effect	20	6
Level 3b: Parenteral medication with a sedative effect	44	14
Level 4: Regional anaesthesia	26	8
Level 5: General anaesthesia	51	16
Total	317	100

the question about polypectomies with 519 responses provided (Figure 1).

Three hundred seventy of 451 participants (70.3%) responded to questions about myomectomies, yielding a total of 491 responses. Of those 45 (14.2%) respondents gave hormonal preparation before a myomectomy procedure. One hundred and forty-five (45.7%) participants performed less than 20 myomectomies per year, 113 (35.6%) performed 20 to 50, 47 (14.8%) 50 to 100 and 12 (3.8%) more than 100 myomectomies yearly. 26 Fr bipolar resectoscopes was the preferred technology (198, 40.3%) amongst respondents (Figure 2).

Fifty three (16.7%) respondents used anti-adhesive gel and 44 (13.9%) placed an intrauterine device after myomectomy. Eighty four (26.5%) respondents gave postoperative oestrogen therapy. One hundred ninety eight (62.5%) of responders performed ultrasonographic evaluation after the procedure. One hundred fifty seven (49.5%) participants reported performing a hysteroscopic control a few months after the index procedure, usually within 3 months later (Figure 3). In case of potential residual fibroid, 62 (19.6%) reported directly performing a second surgical step with 155 (48.9%) reporting treatment in an office setting if the residual fibroid is <1 cm in size. One hundred (31.5%) respondents reported never removing residual fibroid tissue in an office setting.

Three hundred and eighty-one responses were provided by 317 (70.3%) respondents of those 272 (85.8%) respondents reported treating fewer than 20 cervical niche cases per year, 37 (11.7%) 20 to 50, seven (2.2%) 50 to 100 cases and one surgeon (0.3%) reported more

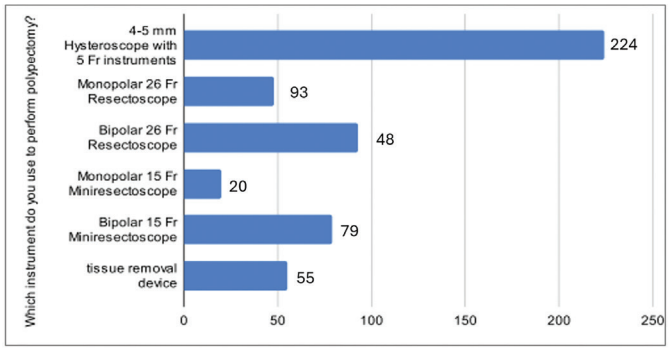

Figure 1. Instruments used to perform polypectomy (n=519 responses).

Note: Multiple responses allowed.

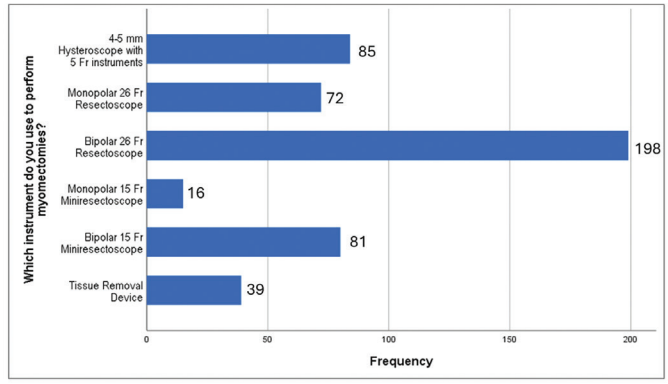

Figure 2. Instruments used to perform myomectomy (n=491 responses).

Note: Multiple responses allowed.

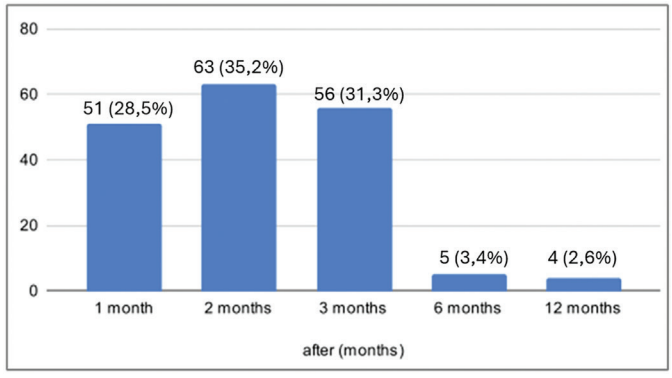

Figure 3. Time of hysteroscopic control after the myomectomy (n=179 responses).

Note: Multiple responses allowed.

than 100 cases treated per year (Figure 4). Of 317 (70.3%) respondents, 203 (64.0%) surgeons treated fewer than 10 uterine malformation cases per year, 62 (19.6%) 10 to 20 cases, 32 (10.1%) 20 to 50 cases and 20 (6.3%) more than 50 cases yearly, yielding a total of 424 answers (Figure 5). Among 371 respondents (70.3%), most reported use a 4-5 mm hysteroscopes (166; 39.2%), followed by 26 Fr bipolar resectoscopes (98; 23.1%), providing 424 responses (Figure 5). Among the less frequent hysteroscopic procedures was the treatment of Asherman's syndrome: 92 (29.0%) respondents did not have any cases, while 117 (36.9%) treated 1 to 2 cases per year, 60 (18.9%) two to five cases and 48 (15.1%) more than five cases annually.

In the case of the conservative treatment of endometrial cancer, 276 (87.1%) respondents performed fewer than five conservative treatments for endometrial cancer per year, 22 (6.9%) five to 10, seven (2.2%) 10 to 20 and 12 (3.8%) reported undertaking more than 20 procedures per year.

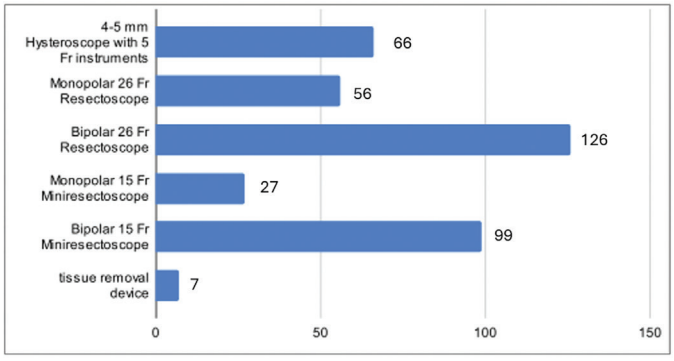

Figure 4. Instruments used to treat cervical niche (n=381 responses).

Note: Multiple responses allowed.

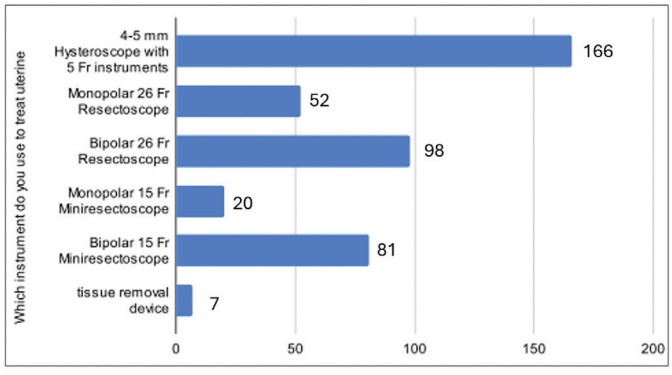

Figure 5. Instruments used to treat uterine malformations (n=424 responses).

Note: Multiple responses allowed.

Quality Assurance

Of 313 (69.4%) respondents, 220 (70.3%) participants reported routinely collecting post-procedure patient feedback and 182 (58.1%) had a reporting system for complications. One hundred fifty two (48.6%) respondents reported producing a routine annual report.

Discussion

The results of this ESGE survey provide a comprehensive look into the different practices and challenges associated with hysteroscopic procedures worldwide. The diversity in responses reflects not only the flexibility of hysteroscopy as a minimally invasive procedure but also the influence of regional differences in healthcare resources, national health system funding, and patient demographics. Additionally, differences in practitioner training and the availability and accessibility of advanced training programs may contribute to the observed variations in survey responses.

The survey highlights significant trends in procedural approaches, equipment usage, and patient management, offering a detailed snapshot of how hysteroscopy is performed differently worldwide. The data shows that while there is a consensus on certain practices, such as the preference for saline solution as a distention medium and the widespread use of rigid hysteroscopes, there is also considerable variability in other aspects, such as pain management and postoperative care.

Main Findings

This survey highlights the varied practices among the ESGE members in the hysteroscopic management of intrauterine pathologies. The survey identified significant variability in the settings where hysteroscopic procedures are performed, ranging from office environments to fully equipped operating rooms. The fact that 40% of respondents conduct procedures in outpatient settings points to a growing trend to provide convenient and efficient diagnosis and treatment with minimal disruption to women's daily lives. However, the continued use of operating rooms by over a third of respondents indicates that for more complex or higher-risk procedures, the controlled operating room environment, allowing provision of anaesthesia and access to advanced surgical resources is still deemed necessary.

Clinicians reported being well-equipped for diagnostic procedures, but a quarter were not satisfied with the equipment available to them for operative procedures,

reflecting the greater resources and infrastructure needed for operative hysteroscopy. However, less than half of respondents reported integrating ultrasound with hysteroscopy.[2] Such a combined approach may enhance both the precision and effectiveness of hysteroscopy, especially for complex cases. Greater access to ultrasound at the time of hysteroscopic procedures has the potential to enhance the quality of care provided and improve patient outcomes.

Polypectomy was the most performed operative procedure, followed by hysteroscopic myomectomy. Small diameter hysteroscopes (4-5 mm), which are associated with less pain and fewer complications, were most used reflecting a trend towards minimally invasive techniques that prioritise patient safety and comfort. A previous study showed that the use of the 4-5 mm hysteroscope is safer than the 26 Fr resectoscope.[14] Despite this, the 26 Fr resectoscope was the second most used instrument. Insertion requires cervical dilation and level 3a and higher pain control (i.e., sedation, regional or general anaesthesia) and increases the risk of uterine perforations. It was surprising the relative infrequency of use of tissue removal systems for removing polyps. High-quality evidence shows these technologies to be superior to conventional electrosurgical approaches, especially in an outpatient setting.[15-17] Wider adoption of small diameter hysteroscopic tissue removal systems should be encouraged across Europe.

Regarding myomectomy, a 26 Fr resectoscope is most used for removing submucosal fibroids. However, the introduction of smaller devices like the 15 Fr mini-resectoscope and hysteroscopic tissue removal systems were also adopted offering less dilation and, potentially, fewer complications such as cervical injury.[18] For uterine malformations, the most often popular instrument was the 4-5mm hysteroscope, followed by the 26 Fr resectoscope. Previous studies have shown that the 15 Fr mini-resectoscope reduce need for cervical dilation and anaesthesia, reducing cervical trauma, make it a compelling alternative to the larger resectoscope.[19]

Of note, for all operative procedures where energy was used, bipolar systems were more popular but monopolar systems are still widely used. Bipolar systems are safer with significant decrease in hyponatraemia from fluid overload and associated with reduced operative times and post-operative hospital stay. Thus, bipolar energy is recommended in preference to monopolar energy.[20,21]

Clinical and Policy Implications

The variability in procedural settings and pain management practices suggests that there is no one-size-fits-all approach to the setting and model of care for hysteroscopy. However, to improve the quality and range of care patients can receive necessitates greater standardisation of practice where evidence exists. Understanding the variation in practice is the first step to develop policies to provide more consistency in access to care and clinical outcomes. Such strategies should be multifactorial encompassing research, guideline development prioritisation of funding and provision of equipment. In addition, education and training are of key importance. For example, the ESGE's structured educational initiatives, particularly the Gynaecological Endoscopic Surgical Education and Assessment programme, which over the past 12 years has provided standardised training and assessment in minimally invasive gynaecological surgery are innovations that can develop clinicians' skills and ensure hysteroscopy is more widely adopted as the preferred approach for managing intrauterine pathologies.

Strengths and Limitations

The survey provides a snapshot of hysteroscopic practice for intrauterine pathologies from over 50 European countries. However, whilst the results appear to be generalisable across Europe geographically, the external validity is restricted because of the low, overall response rate; only 11.3% response rate from ESGE members. The reliance on self-reported data may introduce reporting bias, with participants may overestimate or exaggerate their adherence to best practices. As a result, the findings may not accurately reflect real-life practice. Validity may have been further compromised by deficiencies in the design of the survey: Responses to individual questions were not mandatory, resulting in variable numbers of participants responding to questions. Some questions only allowed to one response where multiple responses would have better reflected an individuals practice e.g., many hysteroscopists perform procedures in more than one setting or use more than one technology according to their preferences, case complexity and pathology characteristics. Questions pertaining to the annual number of procedures did not include the response of "zero", a limitation that could have influenced the reported frequency of less common procedures, such as the conservative management of endometrial cancer. Finally, retained pregnancy tissue is increasingly being

removed using hysteroscopic systems but an opportunity to enquire about current practices for treating this type of acquired intrauterine pathology was overlooked.[22]

Conclusion

Our survey highlights several key areas for future research and development. There is a clear need for more robust, standardised guidelines that can help harmonise practices across different regions and healthcare settings. These guidelines should address the disparities in pain management, the use of postoperative care measures, and the integration of advanced imaging technologies. Future research should also investigate barriers to the broader adoption of newer mini-invasive hysteroscopic instruments and technologies to facilitate their integration into routine practice. Additionally, further studies should focus on the barriers to adopting best practices, particularly in low-resource settings, and explore ways to overcome these challenges through targeted training and resource allocation.

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Ethical approval: Ethical approval was not required for this study, as it involved a voluntary, anonymous survey among clinical professionals and did not include patient data or interventions. Participation in the survey was voluntary and anonymous.

Informed consent: Completion of the survey implied informed consent.

Data sharing: The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request.

Transparency: This manuscript is an honest, accurate, and transparent account of the study. No important aspects have been omitted, and any discrepancies from the original study plan have been explained.

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Supplementary Figure 1. Survey.

PART 1. General characteristics (personal information)
1. Country of practice (Countries list)

2. Practice type
- Public non-academic
- Public academic
- Private
- Others

3. How many diagnostic hysteroscopies do you perform/year?
- < 100
- 100-250
- 250-500
- > 500

4. How many operative hysteroscopies do you perform/year?
- < 100
- 100-250
- 250-500
- > 500

5. Is Hysteroscopy your preferred activity (more than 50% of activity)?
- Yes
- No

6. Did you have a specific training in hysteroscopic surgery?
- Yes
- No

PART 2. Facility and General Characteristic of Hysteroscopic Procedures

7. What is the pain management (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") that can be offered to the patients in your facility?
- Level 1
- Level 2
- Level 3a
- Level 3b
- Level 4
- Level 5

8. What is the healthcare setting (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") offered to the patients?
- Office
- Outpatient Clinic
- Operating Room

9. What is the model of care for operative hysteroscopy (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") offered to the patients?
- Office
- Outpatient or Ambulatory
- Extended recovery
- Inpatients

10. What is your approach to hysteroscopic procedure?
- Vaginoscopic approach
- Speculum assisted

11. Nurse presence:
- Always
- Never
- Sometimes

12. Digital hysteroscopic Clinic concept available (2D-3D ultrasound evaluation + hysteroscopy in the same room):
- Yes
- No

13. Does your hysteroscopy room have adjoining patient changing facilities and toilets?
- Yes
- No

14. Are you happy with the quality of your endoscopic imaging technology?
- Yes
- No

15. Do you consider your hysteroscopy room to be appropriately equipped to perform diagnostic procedures?
- Yes
- No

16. Do you consider your hysteroscopy room to be appropriately equipped to perform operative procedures?
- Yes
- No

17. Do you provide patient information leaflets prior to the appointment?
- Yes
- No

18. Is written consent obtained from the patients prior to the procedure?
- Yes
- No

19. Do you provide patient a standardize report of the procedure with images?
- Yes
- No

20. Do you ROUTINELY perform pregnancy tests for all premenopausal patients prior to the procedure?
- Yes
- No

21. Routine administration of antibiotics perioperatively:
- Yes
- No

22. Routine administration of antibiotics postoperatively:
- Yes
- No

23. Do you offer cervical preparation with medication prior to the procedure?
- Yes (Specify: _____)
- No

PART 3. Detailed Characteristic of Hysteroscopic Procedures

24. Which level of pain management (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") do you use for diagnostic hysteroscopies?
- Level 1
- Level 2
- Level 3a
- Level 3b
- Level 4
- Level 5

25. Which instrument do you use to perform diagnostic hysteroscopy? (Multiple answers allowed)
- <4 mm Hysteroscope
- 4-5 mm Hysteroscope
- > 5 mm Hysteroscope
- Flexible
- Rigid
- 0° optic
- 30° optic

26. Which distension medium do you use for diagnostic hysteroscopies?
- Saline Solution
- CO2
- Sorbitol-Mannitol

27. Which distension medium do you use for operative hysteroscopies?
- Saline Solution
- CO2
- Sorbitol-Mannitol

28. How many polypectomies do you perform/year?
- < 50
- 50-100
- 100-200
- > 200

29. Which level of pain management (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") do you use for polipectomies? (Multiple answers allowed)
- Level 1
- Level 2
- Level 3a
- Level 3b
- Level 4
- Level 5

30. Which instrument do you use to perform polypectomy? (Multiple answers allowed)
- 4-5 mm Hysteroscope with 5 Fr instruments (scissors, forceps, electrodes)
- Monopolar 26 Fr Resectoscope
- Bipolar 26 Fr Resectoscope
- Monopolar 15 Fr Miniresectoscope
- Bipolar 15 Fr Miniresectoscope
- Tissue Removal Device

31. Do you use any preoperative hormonal therapy to prepare the endometrium before performing polipectomy?
- Yes (specify: _____)
- No

32. How many myomectomies do you perform/year?
- < 20
- 20-50
- 50-100
- > 100

33. Which level of pain management (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") do you use for myomectomies? (Multiple answers allowed)
- Level 1
- Level 2
- Level 3a
- Level 3b
- Level 4
- Level 5

34. Which instrument do you use to perform myomectomies? (Multiple answers allowed)
- 4-5 mm Hysteroscope with 5 Fr instruments (scissors, forceps, electrodes)
- Monopolar 26 Fr Resectoscope
- Bipolar 26 Fr Resectoscope
- Monopolar 15 Fr Miniresectoscope
- Bipolar 15 Fr Miniresectoscope
- Tissue Removal Device

35. Do you use any preoperative hormonal therapy to prepare the endometrium before performing myomectomies?
- Yes (specify...)
- No

36. Do you use anti-adhesion gel after the procedure?
- Yes
- No

37. Do you insert coil after the procedure to prevent intrauterine adhesions?
- Yes
- No

38. Do you use oestrogen therapy after the procedure?
- Yes
- No

39. Do you perform any post-procedural ultrasound evaluation?
- Yes
- No

28. How many polypectomies do you perform/year?
- < 50
- 50-100
- 100-200
- > 200

29. Which level of pain management (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") do you use for polipectomies? (Multiple answers allowed)
- Level 1
- Level 2
- Level 3a
- Level 3b
- Level 4
- Level 5

30. Which instrument do you use to perform polypectomy? (Multiple answers allowed)
- 4-5 mm Hysteroscope with 5 Fr instruments (scissors, forceps, electrodes)
- Monopolar 26 Fr Resectoscope
- Bipolar 26 Fr Resectoscope
- Monopolar 15 Fr Miniresectoscope
- Bipolar 15 Fr Miniresectoscope
- Tissue Removal Device

31. Do you use any preoperative hormonal therapy to prepare the endometrium before performing polipectomy?
- Yes (specify: _____)
- No

32. How many myomectomies do you perform/year?
- < 20
- 20-50
- 50-100
- > 100

33. Which level of pain management (according to the "International Consensus Statement for Recommended Terminology Describing Hysteroscopic Procedures") do you use for myomectomies? (Multiple answers allowed)
- Level 1
- Level 2
- Level 3a
- Level 3b
- Level 4
- Level 5

34. Which instrument do you use to perform myomectomies? (Multiple answers allowed)
- 4-5 mm Hysteroscope with 5 Fr instruments (scissors, forceps, electrodes)
- Monopolar 26 Fr Resectoscope
- Bipolar 26 Fr Resectoscope
- Monopolar 15 Fr Miniresectoscope
- Bipolar 15 Fr Miniresectoscope
- Tissue Removal Device

35. Do you use any preoperative hormonal therapy to prepare the endometrium before performing myomectomies?
- Yes (specify...)
- No

36. Do you use anti-adhesion gel after the procedure?
- Yes
- No

37. Do you insert coil after the procedure to prevent intrauterine adhesions?
- Yes
- No

38. Do you use oestrogen therapy after the procedure?
- Yes
- No

39. Do you perform any post-procedural ultrasound evaluation?
- Yes
- No

40. Do you perform control hysteroscopy after the primary procedure?
- Yes
- No

41. If yes, how many months after the procedure do you perform office hysteroscopy?
- 1 months
- 2 months
- 3 months
- 6 months
- 12 months

42. If you have a residual myoma after the primary procedure:
- If it is <1cm, I will treat it in an office setting
- I always treat myomas in two surgical times
- I never remove the residual myoma in an office setting

43. How many isthmocele do you treat hysteroscopically/year?
- < 20
- 20-50
- 50-100
- > 100

44. Which instrument do you use to treat isthmocele? (Multiple answers allowed)
- 4-5 mm Hysteroscope with 5 Fr instruments (scissors, forceps, electrodes)
- Monopolar 26 Fr Resectoscope
- Bipolar 26 Fr Resectoscope
- Monopolar 15 Fr Miniresectoscope
- Bipolar 15 Fr Miniresectoscope
- Tissue Removal Device

45. How many uterine malformations (complete and partial septum, T-shaped uterus) do you treat/year?
- < 10
- 10-20
- 20-50
- > 50

46. Which instrument do you use to treat uterine malformations? (Multiple answers allowed)
- 4-5 mm Hysteroscope with 5 Fr instruments (scissors, forceps, electrodes)
- Monopolar 26 Fr Resectoscope
- Bipolar 26 Fr Resectoscope
- Monopolar 15 Fr Miniresectoscope
- Bipolar 15 Fr Miniresectoscope
- Tissue Removal Device

47. How many Asherman Syndrome do you treat/year?
- 0
- 1-2
- 2-5
-> 5

48. How many conservative treatments for endometrial cancer do you perform/year?
- < 5
- 5-10
- 10-20
- > 20

PART 4. After the Hysteroscopic Procedures

49. Do you collect any patient feedback?
- Yes
- No

50. Do you have an incidence reporting system for hysteroscopic procedures?
- Yes
- No

51. Do you routinely audit (annual) your service?
- Yes
- No

PART 5. COMMENTS ON THE SURVEY

52. Comments on the survey

Supplementary Figure 2. Respondents by country.

Country	Respondents
Albania	3
Algeria	2
Argentina	4
Azerbaijan	1
Belgium	11
Bolivia	4
Bosnia and Herzegovina	2
Brazil	10
Bulgaria	3
Canada	1
Chile	1
Colombia	10
Croatia	20
Denmark	3
Dominican Republic	2
Ecuador	11
Estonia	3
France	4
Germany	16
Greece	4
Guatemala	1
Honduras	1
Hungary	1
India	7
Indonesia	5
Iran	1
Israel	1
Italy	96
Kenya	1
Kosovo	1
Lithuania	1
Malta	1
Mexico	16
Morocco	1
Netherlands	7
Nicaragua	1
North Macedonia	4
Norway	3
Panama	1
Peru	16
Philippines	22
Poland	6
Portugal	8
Romania	18
Russia	1
Saudi	1
Serbia	3
Slovakia	1
Slovenia	29
South Africa	1
Spain	33
Switzerland	2
Turkey	1
Ukraine	11
United Kingdom	14
Uruguay	6
Venezuela	12
Total	**451**