Accepted Manuscript online: 2026-04-29 Article published online: 2026-05-19

Use of ESGE clinical practice guidelines in daily endoscopy: Results of a national survey of Spanish endoscopists

OPEN ACCESS

Authors
Marco Bustamante-Balén[1,2], Sylwia Jaworska[2], Vicente Lorenzo-Zúñiga[1,2], Lidia Argüello Viudez[1,2], Noelia Alonso-Lazaro[1,2], Carla Satorres[1,2], María García Campos[1,2], Vicente Pons Beltrán[1,2]

Institutions
1 Gastrointestinal Endoscopy Unit, Hospital Universitari i Politecnic La Fe, Valencia, Valencia, Spain
2 Instituto de Investigación Sanitaria La Fe, Valencia, Valencian Community, Spain

Key words
Quality and logistical aspects, Training, Quality management

received 10.2.2026
accepted after revision 29.4.2026
accepted manuscript online 29.4.2026

Bibliography
Endosc Int Open 2026; 14: a28674269
DOI 10.1055/a-2867-4269
ISSN 2364-3722
© 2026. The Author(s).
This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)
Georg Thieme Verlag KG, Oswald-Hesse-Straße 50, 70469 Stuttgart, Germany

Corresponding author
Dr. Marco Bustamante-Balén, Hospital Universitari i Politecnic La Fe, Gastrointestinal Endoscopy Unit, Valencia, Valencia, Spain
bustamante_mar@gva.es

Supplementary Material is available at https://doi.org/10.1055/a-2867-4269

ABSTRACT

Background and aims European Society of Gastrointestinal Endoscopy (ESGE) guidelines aim to standardize endoscopic care, yet their daily use and implementation barriers are not fully understood. This study assessed ESGE guideline use patterns, perceived barriers, and preferred implementation strategies among Spanish endoscopists.

Methods A national, cross-sectional, web-based survey targeted all members of the Spanish Society of Gastrointestinal Endoscopy. The questionnaire explored guideline use, perceived usefulness, implementation barriers (categorized by a structured framework), and potential implementation measures. Exploratory multivariable logistic regression analyses were performed to identify factors associated with guideline use.

Results A total of 114 endoscopists completed the survey (11%). ESGE guidelines were frequently used, especially for specific clinical questions (93%), and deemed more useful than unstructured sources (e.g., Google, commercial representatives). Multivariable analysis showed that increasing age was significantly associated with lower odds of frequent clinical guideline use (odds ratio 0.91, 95% confidence interval 0.86–0.97). Barriers concerning awareness or access were uncommon. Internal barriers, including guideline complexity (36.0%), perceived weak evidence (20.2%), and language (19.3%), were frequently reported. Environmental barriers, such as limited feasibility of implementing recommendations in local settings (33.3%), were also common. Digital point-of-care tools (94.7%) and improved web-based search functions (89.5%) were most supported implementation measures.

Conclusions Spanish endoscopists widely value and frequently use ESGE guidelines. Primary implementation barriers relate to guideline format, language, and local feasibility, not lack of agreement. Targeted improvements in guideline design and dissemination can enhance uptake in routine endoscopic practice.

Introduction

Clinical practice guidelines (CPGs) are essential tools that assist clinicians in decision-making. They provide evidence-based management of medical conditions, reduce variability in clinical care, and enhance healthcare quality and outcomes [1].

Despite the increasing number of CPGs published annually, their implementation in clinical practice remains challenging. For example, a systematic review of adherence to Barrett´s esophagus (BE) surveillance guideline recommendations revealed adherence rates of only 55% for the non-dysplastic BE surveillance interval, 50% for the low-grade dysplastic BE surveillance interval, and 49% for the Seattle protocol [2]. Failure to adhere to CPGs may result in suboptimal patient care, preventable harm, and inefficient resource utilization [3]. The European Society of Gastrointestinal Endoscopy (ESGE) has published over 50 guidelines and position statements on several gastrointestinal conditions. Suboptimal adherence to ESGE guidelines has also been reported, as demonstrated by an Italian study evaluating adherence to quality recommendations in upper and lower endoscopy [4].

Numerous studies have analyzed and identified possible barriers to guideline adherence. In 1999, Cabana et al. [5] performed a systematic review of these studies, identifying and grouping barriers into those affecting knowledge about guidelines, those influencing physician attitude towards guidelines, and those influencing practical physician behavior. Given its inclusion of reports evaluating adherence across different specialties, this study provides a framework for systematically analyzing reasons for nonadherence to CPGs.

A primary task of the ESGE is to develop guidelines and position statements that incorporate the most recent evidence and adhere to a strict methodology [6]. Despite the high number of published guidelines, the specific factors and barriers influencing use of ESGE guidelines remain underexplored. Addressing this gap could facilitate widespread adoption of ESGE guidelines in routine practice. Our aim was to identify patterns of use of ESGE guidelines and possible barriers to their implementation in clinical practice, allowing detection of areas for improvement for guideline developers.

Methods

This was a cross-sectional, online survey using a 19-question anonymous questionnaire administered in October 2022 to members of the Spanish Society of Gastrointestinal Endoscopy (SEED) via a Google Forms link. This was an ad-hoc designed questionnaire, internally tested by four staff members of our unit with varying levels of experience for understanding and content validity. Questions that could lead to misinterpretations were rephrased. All SEED members were eligible to participate in the survey, regardless of their training level. To ensure data integrity, only one response per IP address was permitted. Participation was voluntary, with no incentives or fees offered. The survey was available for 30 days and only a single reminder was sent to SEED members 2 weeks after the initial invitation. No formal sample size calculation was performed because of the exploratory nature of the study.

Questionnaire

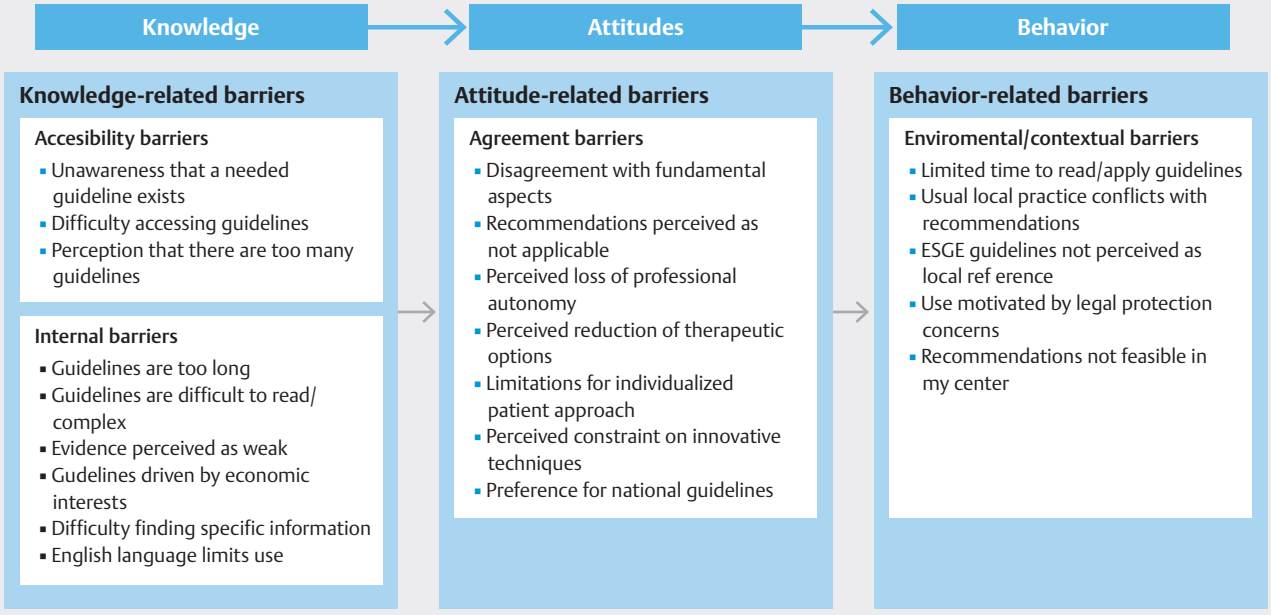
The survey comprised seven sections; the initial two sections aimed to gather information on respondent demographics and professional profiles, as well as general usage patterns and opinions regarding the ESGE guidelines. The subsequent four sections explored barriers influencing physician behavior related to guideline adherence, based on the framework proposed by Cabana et al. [5], adapted to the endoscopy context (▶ **Fig. 1**). The final section investigated potential implementation strategies.

Section 1 included seven questions regarding respondent demographic and professional profiles. Section 2 included five questions concerning patterns of guideline use and general opinions about guidelines. Section 3 (“accessibility barriers”) included one question regarding guideline accessibility and awareness. Section 4 (“internal barriers”) included one question regarding barriers related to the structure and design of the guidelines. Section 5 (“agreement barriers”) included one question regarding barriers related to level of agreement with the guidelines. Section 6 (“environmental barriers” included two questions regarding organizational or system-level barriers potentially affecting guideline use. Section 7 (“implementation measures”) included two questions concerning possible implementation measures to improve application of ESGE guidelines.

Several questions included multiple items that were assessed using a five-point Likert scale. For statements utilizing a 5-point ordinal scale (1 = strongly disagree to 5 = “strongly agree”), responses were grouped for analysis. “Strongly disagree” and “somewhat disagree” were categorized as “disagree,” whereas “strongly agree” and “somewhat agree” were categorized as “agree.” Incomplete surveys were included in the analysis. The survey was originally developed and administered in Spanish. The English version of the questionnaire is provided in the Supplementary Material.

Statistical analysis

Descriptive statistics were used to summarize respondent characteristics and survey responses. Continuous variables are presented as medians with ranges and categorical variables are presented as absolute frequencies and percentages. In addition to descriptive analyses, exploratory multivariable logistic regression models were constructed to identify independent factors associated with patterns of guideline use. Because the number of events was too low, multivariate analysis was not extended to assess characteristics related to barriers to implementation. Separate models were fitted using three patterns of use: 1) frequent use of CPGs; 2) reading only the recommendation box; and 3) reading the whole guideline. For the pattern of use “considering the level of evidence,” multivariable modelling was not performed because of high prevalence of the outcome and absence of relevant unadjusted differences. Given the sample size and number of events for some outcomes, the number of predictors included in each model was intentionally restricted to reduce risk of overfitting. Age and sex were select-



Adapted from Cavana et al. "Why Don't Physicians Follow Clinical Practice Guidelines: A Framework for improvement". JAMA 1999;282:1458-65.
ESGE = European Society of Gastrointestinal Endoscopy

▶ **Fig. 1** Operational framework for barrier analysis.

ed a priori as core variables for adjustment, and hospital type (tertiary vs. district) was included in models where clinically relevant. Practice setting and dual ESGE membership were not included in the final models because of sparse data in some categories leading to unstable estimates and wide confidence intervals. Adjusted odds ratios (ORs) with corresponding 95% confidence intervals (CIs) were calculated for the analysis. Model calibration was assessed in models showing statistically significant associations using the goodness-of-fit test. Statistical significance was defined as a two-sided P <0.05. Missing data were minimal (**Supplementary Fig. 1**) and were handled using complete case analysis. No imputations were performed. Given the exploratory nature of the study and the sample size, no sensitivity analyses were performed.

All analyses were performed using Stata version 14 (StataCorp, College Station, Texas, United States). All surveys, including incomplete ones, were included in the descriptive analysis.

Ethical issues

This study did not involve patients; therefore, according to local regulations, formal approval from the Institutional Review Board was not required. The SEED Governing Board supported this study and the SEED Technical Secretariat assisted with online submission of the survey. The survey was anonymous and the data were stored on secure servers and accessed only by the study investigators. The study was reported following the Consensus-based Checklist for Reporting of Survey studies (CROSS) guideline (**Supplementary Material 2**) [7].

Results

The survey was distributed to 1,036 members of the Spanish Society of Gastrointestinal Endoscopy (SEED), of whom 114 (11.0%) completed the questionnaire.

Respondent characteristics

Fifty-two respondents (45.6%) were women and median age was 41 years (range 28–69). Most respondents (69; 60.5%) had over 10 years of experience, worked exclusively in the public sector (67; 58.8%), and were affiliated with tertiary referral centers (96; 84.2%). Most were dual members of the ESGE (83; 72.8%). Compared with available data on SEED membership, respondents were more frequently dual ESGE members (72.8% vs. 43.2%) and more often worked in tertiary centers (84.2% vs. 37.7%). Reasons for non-response were not assessed.

Opinion about guidelines and patterns of use

All respondents were aware of the existence of guidelines; however, only nine (7.9%) had participated in guideline development. Nearly all endoscopists found the guidelines useful in their daily practice (99.2%) and for specific situations (91.2%).

Patterns of guideline use are summarized in ▶ **Table 1**. All respondents reported using guidelines, with 95 (83.3%) using them frequently. In the adjusted logistic regression model (▶ **Table 2**), increasing age was significantly associated with lower odds of frequent clinical guideline use (OR 0.91, 95% CI 0.86–0.97). More than half of those surveyed (62.3%) reported reading the entire guideline. Physicians working in district hospitals had significantly lower odds of reading the full guideline

▶ **Table 1** Patterns of use and opinions about the ESGE guidelines as a source of information.

	Agree		Neither agree – nor disagree		Disagree	
	N	(%)	N	(%)	N	(%)
Patterns of use						
I read every published guideline	57	(50.0)	30	(26.3)	27	(23.7)
I read the one I need for solving a specific problem	106	(93.0)	3	(2.6)	5	(4.4)
I read the whole guideline	71	(62.3)	29	(25.4)	14	(12.3)
I only read the recommendations	59	(51.7)	28	(24.6)	23	(23.7)
I search the specific information I need for a patient into a guideline	98	(86.0)	15	(13.2)	1	(0.8)
I consider the level of evidence of each recommendation	94	(82.5)	16	(14.0)	4	(3.5)
Guidelines compared to other sources of information	**More useful**		**Equally useful**		**Less useful**	
	N	(%)	N	(%)	N	(%)
Compared to experience	63	(55.3)	36	(31.6)	15	(13.1)
Compared to congresses	45	(39.5)	57	(50.0)	12	(10.5)
Compared to research articles	55	(48.2)	53	(46.5)	6	(5.3)
Compared to medical books	67	(58.8)	33	(28.9)	14	(12.3)
Compared to Google	80	(70.2)	7	(6.1)	27	(23.7)
Compared to UpToDate	43	(37.7)	59	(51.8)	12	(10.5)
Compared to sales representative	81	(71.0)	6	(5.3)	27	(23.7)

ESGE, European Society of Gastrointestinal Endoscopy.

than those in general hospitals (OR 0.22, 95% CI 0.06–0.87). No other variables were significantly associated with this outcome.

In contrast, 51.7% of respondents reported reading only the recommendations. No significant associations were observed between age, sex, or hospital type and this outcome. Finally, most endoscopists (82.5%) considered the evidence level of the recommendation. No endoscopist characteristics were related to this behavior.

Comparing usefulness of guidelines to that of other sources of information (▶ **Table 1**), guidelines were considered more useful than non-structured sources such as Google (70.2%) or commercial representatives (71.0%). On the contrary, they were found equally useful for specific educative sources such as congresses, research articles, and UpToDate, a point-of-care clinical decision-support resource.

Accessibility and internal barriers

Knowledge of guidelines or access difficulty did not seem to be relevant problems among our respondents (5.3% and 2.6%, respectively). However, several internal barriers have been identified. An excessive number of guidelines was reported by 19 endoscopists (16.7%) (▶ **Table 3**). A considerable percentage of respondents thought that the guidelines were too long (18.4%) or difficult to read (36%). Weak evidence on which many recommendations are based was a concern for 20% of endoscopists. Expertise of the authors, the rate of updates, and possible economic interest in the guidelines were not significant barriers in our survey, with less than 8% of respondents agreeing with these statements. In contrast, English was perceived as an important barrier to reading guidelines by a significant proportion of endoscopists (19.3%).

Agreement barriers

Most endoscopists did not have significant agreement barriers, with approximately 5% disagreeing with the recommendations or feeling that the recommendations were not applicable. Less than 10% of endoscopists thought that guidelines decreased their autonomy or therapeutic options (▶ **Table 4**). The most frequently reported agreement barrier was a preference for national over ESGE guidelines, although this was observed by only a small proportion of respondents (13.2%).

Environmental barriers

Lack of time to read the guidelines was reported by 14.9% of endoscopists. One-third of the respondents (38, 33.3%) found it impossible to follow guideline recommendations in their cen-

▶ **Table 2** Multivariable analysis for patterns of use of ESGE guidelines.

	Frequent guideline use		Read only the recommendation box		Read the whole guideline	
Variable	**OR (95%CI)**	***P* value**	**OR (95%CI)**	**P value**	**OR (95%CI)**	***P* value**
Age	0.91 (0.86–0.97)	0.002	0.97 (0.92–1.02)	0.219	0.96 (0.91–1.02)	0.210
Female sex	0.55 (0.17–1.77)	0.318	1.69 (0.61–4.68)	0.309	0.99 (0.27–3.70)	0.994
Hospital						
Academic (ref.)	–	–	–	–	–	–
District	0.35 (0.10–1.31)	0.120	2.23 (0.55–8.95)	0.259	0.22 (0.06–0.87)	0.031

ESGE, European Society of Gastrointestinal Endoscopy.

▶ **Table 3** Accessibility and internal barriers.

	Agree		Neither agree nor disagree		Disagree	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**
Accessibility barriers						
I did not know that a specific guideline I needed existed	6	(5.3)	20	(17.5)	88	(77.2)
It is difficult to get access to guidelines	3	(2.6)	10	(8.8)	101	(88.6)
There are too many guidelines	19	(16.7)	31	(27.2)	64	(56.1)
Internal barriers						
Guidelines are too long	21	(18.4)	33	(29.0)	60	(52.6)
Guidelines are tough to read	41	(36.0)	36	(31.6)	37	(32.4)
Authors are not known experts	6	(5.3)	24	(21.0)	84	(73.7)
Guidelines are not up to date	3	(2.6)	12	(10.5)	99	(86.9)
Evidence is too weak	22	(20.2)	40	(35.1)	51	(44.7)
Guidelines are driven by economic interests	8	(7.0)	35	(30.7)	71	(62.3)
It is difficult to find a specific information	8	(7.0)	26	(22.8)	80	(70.2)
The use of English makes it difficult to understand the guidelines	22	(19.3)	17	(14.9)	75	(65.8)

ters. A significant proportion of respondents followed the guidelines for legal protection (17.6%) (▶ **Table 4**).

Measures for implementation

▶ **Fig. 2** summarizes endoscopist level of agreement with the proposed implementation measures. For most of the proposed measures, there was a high level of agreement (>80%). However, development of an online application to help bedside guideline usage was the most supported proposal (94.7%). On the other hand, the least supported proposal (44.7%) was to publish the merits of the authors. Translation of the guidelines into Spanish was supported by 76.3% of respondents.

Discussion

This national survey provides comprehensive insights into Spanish endoscopist engagement with ESGE CPGs, identifying both patterns of use and perceived barriers to their implementation. Our findings indicate that ESGE guidelines are highly valued and frequently consulted in daily practice, particularly when addressing specific clinical queries. However, the study also revealed distinct patterns of use and several modifiable barriers, suggesting clear opportunities for enhancing guideline design and dissemination strategies.

Most respondents reported frequent use of ESGE guidelines, consistent with prior research identifying CPGs as fundamental sources of decision support and ongoing education [8]. Exploratory multivariable analyses revealed a significant association between younger age and more frequent guideline use, suggesting

▶ **Table 4** Agreement and environmental barriers.

	Agree		Neither agree nor disagree		Disagree	
	N	(%)	N	(%)	N	(%)
Agreement barriers						
I disagree with fundamental aspects	5	(4.4)	39	(34.2)	70	(61.4)
Recommendations are not applicable	6	(5.3)	24	(21.0)	84	(73.7)
Guidelines decrease my autonomy	7	(6.1)	15	(13.2)	92	(80.7)
Guidelines decrease my therapeutic options	4	(3.5)	20	(17.5)	90	(79.0)
Guidelines limit my approach to a particular patient	4	(3.5)	22	(19.3)	88	(77.2)
Guidelines difficult performing innovative techniques	5	(4.4)	25	(21.9)	84	(73.7)
I´d rather use national guidelines	15	(13.2)	50	(43.8)	49	(43.0)
I´d rather use ASGE guidelines	4	(3.5)	41	(36)	69	(60.5)
Environmental barriers						
I do not have enough time to read and apply guidelines	17	(14.9)	41	(36.0)	56	(49.1)
If guidelines contradict local practice, I am less likely to adhere to them	9	(7.9)	30	(26.3)	75	(65.8)
ESGE guidelines are not a reference in Spain	9	(7.9)	21	(18.4)	84	(73.7)
I follow guidelines for legal protection	20	(17.6)	38	(33.3)	56	(49.1)
Guidelines recommend procedures that cannot be performed in my center	38	(33.3)	37	(32.5)	39	(34.2)

ASGE, American Society for Gastrointestinal Endoscopy; ESGE, European Society of Gastrointestinal endoscopy.

a generational shift in information-seeking behaviors. However, no significant age correlation emerged when comparing guideline engagement patterns, unlike findings in cognitive studies that distinguish experts from novices [9]. Additional endoscopist characteristics, such as sex, practice setting, and hospital type, showed varied and mostly non-significant trends. Interestingly, physicians working in district hospitals had lower odds of reading the full guideline, suggesting a significant environmental influence on the approach to guidelines. However, interpretation of the exploratory multivariable analyses should be approached with caution. The relatively small sample size and the limited number of events for certain variables restricted the number of predictors that could be incorporated into the models, potentially leading to unstable estimates, particularly for less frequent categories. To address this issue, we employed parsimonious models limited to a small set of clinically relevant variables. Therefore, the results should be regarded as hypothesis-generating rather than confirmatory.

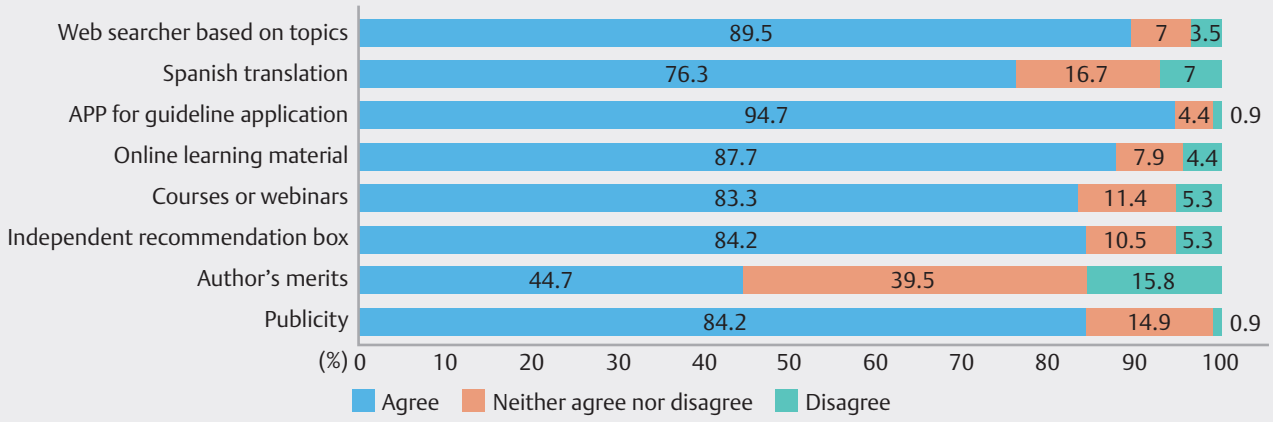
Prior research in other specialties has reported diverse relationships between guideline adherence and physician traits such as age [10], sex [11,12], and institutional setting [13, 14]. This highlights the need for larger studies to better define these patterns and their underlying mechanisms.

When contrasted with other information sources (▶ **Table 1**), the ESGE guidelines were consistently rated as more useful than unstructured or potentially biased resources, such as Google or commercial representatives. Concurrently, they were considered comparably useful to dynamic educational resources such as congresses, primary research articles, and point-of-care decision-support tools. This suggests that guidelines are regarded as complementary rather than superior to other high-value information channels.

An analysis of barriers using a conceptual framework [5] indicates that issues with knowledge or access to ESGE guidelines are not common among surveyed endoscopists.

Instead, internal factors are the main obstacles. A significant number of respondents found the guidelines excessively long or hard to understand. In addition, one in five expressed doubts regarding the strength of the evidence supporting some recommendations. Previous reports have identified complexity [15] and conditional recommendations [16] as key impediments to guideline uptake. These findings suggest that a clearer presentation, better navigation, and transparent communication about uncertainty could improve usability.

Language also acts as a barrier, with nearly one-fifth of respondents reporting that dominance of English limits their use of guidelines; this highlights the importance of translation as a critical implementation strategy (▶ **Fig. 2**). Unlike some other studies [17,18], suspicion of economic interests in guideline development was not a major internal barrier, possibly due to



▶ **Fig. 2** Level of agreement with proposed implementation barriers.

ESGE's robust disclosure policies [6]. Similarly, in contrast to previous studies [8, 17], barriers related to fundamental disagreement, perceived loss of autonomy, or limited applicability were rare. However, a notable proportion of endoscopists favored national guidelines over ESGE recommendations, indicating that potential overlaps or inconsistencies between international and national guidelines might affect adoption. Greater collaboration between the ESGE and national societies could help align recommendations and reduce such differences.

Environmental barriers were more prominent and had a greater clinical impact. Both limited feasibility of implementing recommendations within local settings and time constraints were commonly reported, reflecting well-documented organizational impediments to guideline adherence [16]. In addition, a notable proportion of respondents indicated that they followed guidelines partly for legal protection, a finding consistent with previous studies [19, 20], despite their relatively minor role in medico-legal cases [21].

Most proposed implementation strategies received broad agreement. Digital point-of-care solutions, such as mobile applications and topic-based web search tools, received the strongest approval. This highlights the importance of accessibility and usability during patient care [22, 23]. Educational efforts, including webinars and courses, were well received, despite evidence suggesting that passive didactic conferences have limited effectiveness [24]. Providing structured recommendation summaries is highly valued. In contrast, public reporting of author merits received minimal support. These findings indicate that practical, workflow-integrated tools are likely to have a greater effect than reputation-based strategies.

The main strength of this study lies in its structured, theory-based assessment of real-world ESGE guideline use, providing practical insights for future development and implementation. However, this study has some limitations. First, the low response rate of 11%, although similar to other endoscopy surveys [25], raises concerns about non-response bias and limits generalizability. Moreover, compared with overall SEED membership, the respondent profile was skewed toward endoscopists in tertiary centers (84.2% vs. 37.7%) and dual ESGE members (72.8% vs. 43.2%), indicating overrepresentation of clinicians more engaged with ESGE-related activities and specialized practice settings. This may have led to an overestimation of guideline awareness and use, as well as a potential underestimation of barriers, particularly those relevant to less specialized environments. Nevertheless, this bias should be interpreted cautiously. Although many respondents had over 10 years of experience (60.5%), the results indicated that younger age was independently associated with frequent guideline use, suggesting that experience alone may not predict guideline engagement. Therefore, the magnitude and direction of potential selection bias could not be fully determined.

Second, as mentioned previously, the exploratory design and limited sample size restricted comprehensive multivariable analyses of patterns of use and barrier-related outcomes. Third, its focus on Spain restricts generalizability of the findings, particularly regarding language barriers, to other healthcare systems. Finally, the survey predates widespread artificial intelligence (AI) integration in clinical practice, meaning that AI was not considered as an information source, despite recent reports indicating physician positive attitudes toward AI and its potential to shift primary medical information sources [26].

Conclusions

In conclusion, Spanish endoscopists are highly aware of and frequently use the ESGE guidelines, recognizing their credibility and clinical value. The main obstacles to implementation are related to guideline format, language access, and practical integration into local clinical settings rather than disagreement with the recommendations themselves. This study offers concrete directions for ESGE guideline developers, suggesting that improvements in design, translation efforts, and accessible digital tools are key to increasing guideline adoption and its smooth incorporation into routine endoscopic practice. Further studies in more representative populations are warranted to confirm these observations.

Acknowledgement

The authors thank the Technical Secretariat of the Spanish Society of Gastrointestinal Endoscopy (SEED) for facilitating dissemination of the survey among its members.

Contributors' Statement

Marco Bustamante-Balén: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Software, Supervision, Validation, Writing - original draft, Writing - review & editing. Sylwia Jaworska: Data curation, Project administration, Resources, Writing - review & editing. Vicente Lorenzo-Zúñiga: Methodology, Resources, Visualization, Writing - review & editing. Lidia Argüello Viudez: Data curation, Writing - review & editing. Noelia Alonso-Lazaro: Investigation, Writing - review & editing. Carla Satorres: Investigation, Writing - review & editing. María García Campos: Investigation, Writing - review & editing. Vicente Pons Beltrán: Investigation, Writing - review & editing.

Conflict of Interest

Marco Bustamante-Balén has received consultant fees from Medtronic, Olympus,and Casen Recordati. Vicente Lorenzo-Zúñiga has received consultant fees from Norgine. The rest of the authors have nothing to declare.

References

[1] Institute of Medicine Committee on Standards for Developing Trustworthy Clinical Practice G. et al. Clinical Practice Guidelines We Can Trust. In: Graham R, Mancher M, Miller Wolman Dolman (eds.) Washington (DC): National Academies Press (US); 2011

[2] Roumans CAM, van der Bogt RD, Steyerberg EW et al. Adherence to recommendations of Barrett's esophagus surveillance guidelines: a systematic review and meta-analysis. Endoscopy 2020; 52: 17–28 doi:10.1055/a-0995-0134

[3] Pronovost PJ. Enhancing physicians' use of clinical guidelines. Jama 2013; 310: 2501–2502 doi:10.1001/jama.2013.281334

[4] Zagari RM, Frazzoni L, Fuccio L et al. Adherence to European Society of Gastrointestinal Endoscopy quality performance measures for upper and lower gastrointestinal endoscopy: A nationwide survey from the Italian Society of Digestive Endoscopy. Front Med (Lausanne) 2022; 9: 868449

[5] Cabana MD, Rand CS, Powe NR et al. Why don't physicians follow clinical practice guidelines? A framework for improvement JAMA 1999; 282: 1458–1465 doi:10.1001/jama.282.15.1458

[6] Dumonceau JM, Hassan C, Riphaus A et al. European Society of Gastrointestinal Endoscopy (ESGE) Guideline Development Policy. Endoscopy 2012; 44: 626–629 doi:10.1055/s-0031-1291747

[7] Sharma A, Minh Duc NT, Luu Lam Thang T et al. A Consensus-Based Checklist for Reporting of Survey Studies (CROSS). J Gen Intern Med 2021; 36: 3179–3187

[8] Farquhar CM, Kofa EW, Slutsky JR. Clinicians' attitudes to clinical practice guidelines: a systematic review. Med J Aust 2002; 177: 502–506 doi:10.5694/j.1326-5377.2002.tb04920.x

[9] Patel VL, Arocha JF, Diermeier M et al. Cognitive psychological studies of representation and use of clinical practice guidelines. Int J Med Inform 2001; 63: 147–167 doi:10.1016/s1386-5056(01)00165-4

[10] Hoorn C, Crijns H, Dierick-van Daele ATM et al. Review on factors influencing physician guideline adherence in cardiology. Cardiol Rev 2019; 27: 80–86

[11] Simpson SH, Marrie TJ, Majumdar SR. Do guidelines guide pneumonia practice? A systematic review of interventions and barriers to best practice in the management of community-acquired pneumonia Respir Care Clin N Am 2005; 11: 1–13 doi:10.1016/j.rcc.2004.10.001

[12] Jansson-Knodell CL, Kessler WR. The role of female endoscopists: are women gastroenterologists better at obtaining biopsies for celiac disease than men? Scand J Gastroenterol 2021; 56: 505–507 doi:10.1080/00365521.2021.1887926

[13] Patel MR, Chen AY, Roe MT et al. A comparison of acute coronary syndrome care at academic and nonacademic hospitals. The American journal of medicine 2007; 120: 40–46 doi:10.1016/j.amjmed.2006.10.008

[14] Sorge A, Coletta M, Elli L et al. Clinical practices and adherence to guidelines for eosinophilic esophagitis: A European survey. Dig Liver Dis 2024; 56: 1196–1203 doi:10.1016/j.dld.2023.12.011

[15] Campbell NC, Murchie P. Treating hypertension with guidelines in general practice. BMJ 2004; 329: 523–524 doi:10.1136/bmj.329.7465.523

[16] Correa VC, Lugo-Agudelo LH, Aguirre-Acevedo DC et al. Individual, health system, and contextual barriers and facilitators for the implementation of clinical practice guidelines: a systematic metareview. Health Res Policy Syst 2020; 18: 74 doi:10.1186/s12961-020-00588-8

[17] Formoso G, Liberati A, Magrini N. Practice guidelines: useful and "participative" method? Survey of Italian physicians by professional setting Arch Intern Med 2001; 161: 2037–2042 doi:10.1001/archinte.161.16.2037

[18] Sola I, Carrasco JM, Diaz Del Campo P et al. Attitudes and perceptions about clinical guidelines: a qualitative study with Spanish physicians. PloS one 2014; 9: e86065

[19] Nicholson K, Nasir F, Robinson J et al. Utilization of clinical practice guidelines: a survey of Canadian pediatric physicians. Paed Child Health 2014; 19: e95–e96

[20] Mickan S, Burls A, Glasziou P. Patterns of 'leakage' in the utilisation of clinical guidelines: a systematic review. Postgrad Med J 2011; 87: 670–679 doi:10.1136/pgmj.2010.116012

[21] Brushwood DB. Clinical practice guidelines and the standard of care. Am J Health Syst Pharm 2000; 57: 159–161 doi:10.1093/ajhp/57.2.159

[22] Vandvik PO, Brandt L, Alonso-Coello P et al. Creating clinical practice guidelines we can trust, use, and share: a new era is imminent. Chest 2013; 144: 381–389 doi:10.1378/chest.13-0746

[23] Bierbaum M, Rapport F, Arnolda G et al. Clinical practice guideline adherence in oncology: A qualitative study of insights from clinicians in Australia. PloS one 2022; 17: e0279116

[24] Prior M, Guerin M, Grimmer-Somers K. The effectiveness of clinical guideline implementation strategies–a synthesis of systematic review findings. J Eval Clin Pract 2008; 14: 888–897 doi:10.1111/j.1365-2753.2008.01014.x

[25] Cunha Neves JA, Rodriguez de Santiago E, Pohl H et al. Perspectives and awareness of endoscopy healthcare professionals on sustainable practices in gastrointestinal endoscopy: results of the LEAFGREEN survey. Endoscopy 2024; 56: 355–363

[26] Heinrichs H, Kies A, Nagel SK et al. Physicians' attitudes toward artificial intelligence in medicine: Mixed methods survey and interview study. J Med Internet Res 2025; 27: e74187 doi:10.2196/74187