

# Content, Popularity, and Informational Quality of Menopause-Related YouTube Videos: A Cross-Sectional Analysis

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## ABSTRACT

**Objective:** YouTube is increasingly used by women seeking information on menopause; however, the accuracy and educational quality of this content remain uncertain. This study evaluated content characteristics, popularity metrics, and informational quality of menopause-related YouTube videos and compared these parameters by uploader type (professional vs non-professional) and upload period (pre-2021 vs 2021 and later). **Methods:** In this cross-sectional observational study, YouTube was searched on 26.04.2025-22.08.2025 using a newly created account to reduce personalization. The keywords “menopause,” “menopausal symptoms,” and “menopause treatment” were searched with results sorted by relevance. The first 100 videos were screened, and 50 English-language videos meeting inclusion criteria were analyzed. Extracted variables included views, duration, likes, upload date, content category, and uploader type. Engagement metrics were calculated as like-to-view ratio (likes/views × 100), view rate (views/day since upload), and Video Power Index (VPI) using the formula (like-to-view ratio × view rate) / 100. Informational quality was assessed with a structured scoring approach evaluating clarity, completeness, and accuracy across core menopause domains. Comparisons were performed using Mann-Whitney U tests and chi-square/Fisher’s exact tests, as appropriate. **Results:** Of the 50 videos, most addressed symptom explanation and management (76.0%, n=38), followed by hormone replacement therapy (HRT) (16.0%, n=8), lifestyle/wellness advice (6.0%, n=3), and personal experiences (2.0%, n=1). Uploaders were predominantly gynecologists (56.0%, n=28) and endocrinologists (20.0%, n=10). Overall views were highly skewed (mean 315,420.5±1,200,450.3; median 42,150; range 650–9,500,000). The mean quality score was 8.70±3.80 (median 9; range 2–17). Professional uploaders had significantly higher quality scores than non-professionals (9.30±3.90 vs 6.50±2.80; p=0.018), while VPI did not differ significantly between groups (p=0.420). Videos uploaded in 2021 and later showed higher median VPI than pre-2021 videos (0.680 vs 0.210; p=0.005), but quality scores were similar between periods (p=0.120). **Conclusion:** Menopause-related YouTube content largely emphasizes symptom

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explanation, with comparatively limited coverage of HRT and lifestyle interventions. Professional medical uploaders provide higher-quality information, yet engagement metrics do not reliably reflect educational quality. Strategies that promote evidence-based menopause content on video platforms are needed to reduce misinformation and improve public health impact.

**Keywords:** Menopause, Youtube, Health Information, Hormone Therapy, Video Power Index, Content Quality, Digital Health Literacy.

## ABBREVIATIONS

VPI: Video Power Index; HRT: Hormone Replacement Therapy.

## INTRODUCTION

Menopause is a physiological life stage defined by permanent cessation of menstruation due to ovarian follicular depletion, most commonly occurring between ages 45 and 55 years and frequently accompanied by vasomotor symptoms, sleep disturbance, mood changes, sexual dysfunction, and longer-term metabolic and skeletal consequences that can substantially impair quality of life [1,2]. Because menopausal symptoms may persist for years and require individualized management, many women seek ongoing information beyond routine clinical encounters [2].

Hormone therapy remains the most effective treatment for vasomotor symptoms and has established benefits for appropriately selected patients; nevertheless, ongoing public uncertainty persists regarding safety, contraindications, and cancer risk, contributing to misinformation and decisional conflict [3-5]. In parallel, increasing interest in non-hormonal therapies and lifestyle-based interventions has broadened the range of available claims and advice, which can complicate decision-making if information is incomplete or non-evidence-based [2,5].

The internet is now a major source of health information, and YouTube is one of the most widely used video-sharing platforms globally [6,7]. Video-based education can improve comprehension and engagement, yet YouTube lacks peer review and consistent quality-control mechanisms, enabling dissemination of inaccurate or commercially biased information [6-9]. Prior work across women's health topics suggests professionally produced videos tend to be higher quality than non-professional sources, while view counts and engagement do not consistently correlate with

informational accuracy [10-13]. Despite the clinical and public health relevance of menopause care, menopause-specific evaluations of YouTube content remain limited, and concerns about menopause-related misinformation in the broader online ecosystem have increased [14,15]. Therefore, this study assessed menopause-related YouTube videos' content, engagement metrics, and informational quality, and compared outcomes by uploader type and publication period.

## MATERIALS AND METHODS

### Study design and search strategy

This cross-sectional observational study evaluated menopause-related content on YouTube. The search was performed on 26.04.2025-22.08.2025 using a newly created YouTube account to minimize personalization and algorithm-related bias, following recommended practical considerations for YouTube-based research [16]. The keywords "menopause," "menopausal symptoms," and "menopause treatment" were entered into the YouTube search engine and results were sorted by relevance. The first 100 videos returned by the platform were screened.

### Eligibility criteria

Videos were included if they were: (i) in English, (ii) primarily focused on menopause and/or management of menopausal symptoms, and (iii) had adequate audiovisual quality. Videos were excluded if they were non-English, duplicates, lacked audio or visual components, or were not primarily related to menopause.

### Data extraction and classifications

For each included video, the number of views, duration (minutes), number of likes, upload date, content category, and uploader type were recorded on the day of extraction. Content categories were defined by the video's main purpose: (i) symptom explanation and management, (ii) hormone therapy (HRT/menopausal hormone therapy), (iii) lifestyle and wellness advice, or (iv) personal stories/experiences.

Uploaders were classified as gynecologists, endocrinologists, health coaches, patients, or commercial channels, and then grouped as:

- **Professional:** gynecologists and endocrinologists
- **Non-professional:** health coaches, patients, commercial channels

### Engagement metrics

Engagement metrics were calculated as:

- **Like-to-view ratio (%)**:  $(\text{likes} / \text{views}) \times 100$
- **View rate (views/day)**:  $\text{views} / (\text{days since upload})$
- **Video Power Index (VPI)**:  $(\text{like-to-view ratio} \times \text{view rate}) / 100$

This VPI approach has been used in prior health-content evaluations to combine interaction and visibility into a single indicator [11,12,17].

### Informational quality assessment

Because no single universally accepted tool exists for menopause-specific YouTube quality assessment, an adapted structured scoring approach was used, consistent with prior health-video evaluations [6-9,11,12]. Each video was assessed for clarity, completeness, and accuracy of menopause-related information across core domains (e.g., menopausal physiology, symptom description, evidence-based treatment options including hormonal and non-hormonal therapies, lifestyle advice, and whether content referenced scientific evidence or clinical guidance). A total quality score (0–17) was derived, with higher scores indicating better informational quality.

### Statistical analysis

Analyses were performed using SPSS (version 26.2, IBM Corp., Armonk, NY, USA). Continuous variables were assessed for normality and presented as mean $\pm$ SD or median (range), as appropriate; categorical variables were presented as n (%). Comparisons between professional and non-professional uploaders used Mann-Whitney U tests. Videos were also grouped by upload period as pre-2021 vs 2021 and later; between-period comparisons used Mann-Whitney U tests for continuous variables and chi-square/Fisher's exact tests for categorical variables. A two-sided p-value <0.05 was considered statistically significant.

### Ethics

Ethical approval was not required because all data were derived from publicly accessible YouTube content and no private identifiable information was collected.

## RESULTS

A total of 50 menopause-related YouTube videos meeting inclusion criteria were analyzed. Video characteristics, uploader profiles, engagement metrics, and quality indicators are summarized in Tables 1–6.

Most videos focused on symptom explanation and general management (76.0%, n=38). Videos addressing hormone therapy comprised 16.0% (n=8), lifestyle and wellness advice 6.0% (n=3), and personal stories 2.0% (n=1) (Table 1).

Gynecologists uploaded 56.0% (n=28) of videos and endocrinologists 20.0% (n=10). Non-physician sources included health coaches (10.0%, n=5), patients (8.0%, n=4), and commercial channels (6.0%, n=3) (Table 2).

Engagement and quality metrics are shown in Table 3. Views were highly skewed (mean 315,420.5 $\pm$ 1,200,450.3; median 42,150; range 650–9,500,000). Mean duration was 9.2 $\pm$ 7.1 minutes (median 6.0). Likes were also skewed (mean 5,820.3 $\pm$ 38,450.5; median 350). Mean like-to-view ratio was 0.18% $\pm$ 1.20 and mean view rate was 280.15 $\pm$ 950.60 views/day. Mean VPI was 4.85 $\pm$ 25.30 (median 0.28; range 0.00–160.00). The mean quality score was 8.70 $\pm$ 3.80 (median 9.0; range 2–17).

When grouped by uploader type, VPI did not significantly differ between professional and non-professional sources (p=0.420). In contrast, quality scores were significantly higher among professional uploaders (9.30 $\pm$ 3.90 vs 6.50 $\pm$ 2.80; p=0.018) (Table 4).

Upload frequency peaked in 2022 (24.0%, n=12) and 2023 (22.0%, n=11) (Table 5). When compared by upload period, videos uploaded in 2021 and later had significantly higher median VPI than pre-2021 videos (0.680 vs 0.210; p=0.005), while quality scores did not significantly differ (p=0.120) (Table 6). The proportion classified as “medical content” was similar between periods (78.3% vs 81.5%; p=0.780).

## TABLES

**Table 1.** Distribution of video content

Category	n	%
Symptom explanation & management	38	76
Hormone therapy (HRT/MHT)	8	16
Lifestyle & wellness advice	3	6
Personal stories & experiences	1	2
Total	50	100

**Table 2.** Distribution by uploader type

Uploader	n	%
Gynecologist	28	56
Endocrinologist	10	20
Health coach	5	10
Patient	4	8
Commercial	3	6
Total	50	100

**Table 3.** Descriptive characteristics of videos

Feature	Mean	Std Dev	Median	Min	Max
Views	3,15,420.50	12,00,450.30	42,150.00	650.00	95,00,000.00
Duration (min)	9.20	7.10	6.00	1.50	35.00
Likes	5,820.30	38,450.50	350.00	15.00	2,50,000.00
Like/View × 100 (%)	0.18	1.20	0.01	0.00	7.50
View rate (views/day)	280.15	950.60	40.20	0.50	6,200.00
VPI	4.85	25.30	0.28	0.00	160.00
Quality Score (0-17)	8.70	3.80	9.00	2.00	17.00

**Table 4.** Comparison of VPI and quality scores by uploader type

Group	VPI (mean±SD)	Quality Score (mean±SD)	p-value (VPI)	p-value (Quality)
Non-professional (n=12)	2.10 ± 3.80	6.50 ± 2.80	0.42	0.018
Professional (n=38)	5.90 ± 28.50	9.30 ± 3.90	0.42	0.018

*Mann-Whitney U test.*

**Table 5.** Distribution of video uploads by year

Year	n	%
2018	3	6
2019	5	10
2020	7	14
2021	10	20
2022	12	24
2023	11	22
2024	2	4
Total	50	100

**Table 6.** Comparison by video upload period

Variable	Pre-2021 (n=23)	2021 and later (n=27)	p-value
Views	45,200 (800–8,200,000)	52,100 (650–9,500,000)	0.32
Duration (min)	8.0 (2.0–30.0)	7.0 (1.5–35.0)	0.85
Likes	380 (20–200,000)	420 (15–250,000)	0.71
View rate (views/day)	25.10 (0.80–5,800.00)	60.30 (0.50–6,200.00)	0.095
VPI	0.210 (0.005–150.000)	0.680 (0.010–160.000)	0.005
Medical content (%)	78.3% (18/23)	81.5% (22/27)	0.78
Quality score	8 (3–16)	9 (2–17)	0.12

*Values are median (range); categorical variables are % (n/N).*

## DISCUSSION

This study provides a structured snapshot of menopause-related content on YouTube and highlights three main findings: (1) the content focus is skewed toward symptom explanation and general advice, with comparatively limited coverage of hormone therapy and lifestyle interventions; (2) professional uploaders provide higher-quality information than non-professional sources; and (3) engagement metrics—particularly VPI—do not reliably indicate informational quality. These findings are clinically relevant because menopause care requires nuanced, evidence-based counseling that balances benefits, risks, contraindications, and patient preferences, and many women access online information before or between clinical encounters [2,4,18]. In our sample, most videos addressed symptom explanation and general management, whereas only 16% focused primarily on hormone therapy and an even smaller proportion on lifestyle/wellness advice or lived experiences. This imbalance matters for real-world counseling, which typically requires not only symptom characterization (e.g., vasomotor symptoms, sleep and mood changes, sexual function) but also

a clear and balanced discussion of evidence-based options, including menopausal hormone therapy and non-hormonal alternatives, consistent with guideline-based approaches (e.g., NICE recommendations and professional society statements) [3,5]. Underrepresentation of hormone therapy-focused content is especially noteworthy given that hormone therapy remains the most effective option for vasomotor symptoms in appropriately selected patients and continues to be widely misunderstood in public discourse [3-5]. In addition, online ecosystems frequently include menopause-related claims that diverge from established guidance and may involve direct or indirect commercial interests, potentially shaping expectations and decision-making in unhelpful ways [14,15]. Thus, even when clinician-created content is present, gaps in treatment-focused, risk-balanced information may still contribute to incomplete understanding. Our findings also align with menopause-specific YouTube research focused on hormone therapy content. A recent quality and reliability analysis of YouTube videos on menopause hormone therapy reported generally low quality and limited informational content, emphasizing the need for evidence-based, unbiased clinician involvement to improve reliability [19]. Taken

together, the current study and menopause hormone therapy-specific analyses suggest that menopause video content may be abundant but not consistently comprehensive, particularly in areas that require risk-benefit framing and individualized decision support.

Professional uploaders achieved significantly higher quality scores than non-professional sources, yet VPI did not differ significantly. This pattern mirrors a large body of YouTube health-content literature across conditions, where clinicians tend to provide more accurate information but are not consistently “rewarded” by higher engagement [6-13,20]. For example, in women’s health and adjacent topics, prior studies have similarly reported higher informational reliability among physician-generated videos without a parallel increase in views or engagement metrics [10-13]. This mismatch is not trivial: if users rely on popularity signals (views, likes, comments) as proxies for trustworthiness, they may be systematically nudged toward content that is more engaging but less accurate—particularly when content includes compelling narratives, strong claims, or commercially appealing “solutions” [6-9,14,15].

More broadly, the quality gap observed here is compatible with evidence showing that misinformation is prevalent across social media and that inconsistent evaluation frameworks contribute to variability in online health information environments [21]. In the context of menopause, recent commentary has emphasized that misinformation can drive unnecessary testing and inappropriate care pathways, underscoring the need for clear, evidence-based messaging that supports symptom-focused clinical evaluation rather than algorithm-amplified trends [15]. Therefore, increasing the visibility of professional menopause education on YouTube is important, but it should be paired with content strategies that improve discoverability, balance, and practical decision support. Engagement-based metrics are influenced by production value, emotional salience, creator popularity, and recommendation dynamics—factors that are only loosely related to scientific accuracy [6-9]. Recommendation systems optimized for watch time and interaction are designed to maximize relevance and engagement at scale rather than adherence to clinical guidance [22]. Consequently, the platform environment can amplify content with strong hooks or simplified messages, even when medical nuance is reduced. This helps explain why professional videos can be higher

quality yet achieve similar engagement to non-professional sources, and it provides a plausible mechanism for the “engagement-quality mismatch” observed in our study.

We found that videos uploaded in 2021 and later had significantly higher median VPI, while quality scores were not significantly different by period. This suggests increased recent engagement without parallel improvement in informational quality. Similar temporal patterns have been observed in health-video analyses where newer content benefits from recency effects and algorithmic promotion, while educational depth remains variable [16]. Importantly, the post-2021 digital environment has also seen an acceleration of commercial menopause services and online menopause discourse, including direct-to-consumer offerings and influencer-driven health narratives [15]. If growth in menopause content and engagement is driven more by market attention and platform incentives than by standardized evidence-based messaging, quality improvement may lag behind reach.

From a public health perspective, YouTube’s potential is substantial. Systematic reviews and meta-analyses suggest video-based health promotion can positively influence knowledge, attitudes, intentions, and health behaviors when content is well designed and evidence-based [23]. Moreover, randomized evidence indicates that quality-controlled YouTube interventions can improve health literacy and health behavioral intention [24]. These findings support a practical conclusion: the central challenge is not whether video education can work, but whether platforms consistently surface high-quality content and whether creators design menopause videos to function as decision support rather than entertainment.

In practice, menopause decision support in videos should include: (i) symptom-based assessment and differential considerations; (ii) clear, guideline-concordant explanation of hormone therapy benefits/risks and contraindications; (iii) evidence-based non-hormonal options; (iv) lifestyle interventions with realistic effect sizes; and (v) prompts to seek individualized clinical evaluation when appropriate [3-5]. Given evidence that online menopause information may include claims outside guidance and that conflicts of interest can be prominent, clinician and academic involvement should also explicitly address common misinformation vectors (e.g., unvalidated testing, exaggerated claims about “bioidentical” regimens, supplement marketing) while

using clear communication and disclosure principles [14]. Finally, a persistent methodological issue in YouTube health research is heterogeneity in quality assessment tools. Studies commonly use DISCERN, JAMA benchmark criteria, PEMAT (understandability/actionability), Global Quality Score (GQS), or bespoke checklists [8,9,17,25-27]. DISCERN was developed for consumer treatment information, JAMA benchmarks emphasize transparency and attribution, and PEMAT supports assessment of understandability and actionability [25-27]. For menopause-related content, a standardized hybrid approach may be most informative: combine completeness/accuracy aligned with guidance, transparency indicators, and actionability. Future studies should also report inter-rater agreement and provide scoring rubrics as supplementary material to strengthen reproducibility [16].

### LIMITATIONS

This study has limitations. First, the sample was limited to English-language videos and the first 100 results sorted by relevance on a single search date, reducing generalizability and reflecting YouTube's dynamic search environment [16]. Second, engagement metrics change over time, so results represent a snapshot at the time of extraction. Third, although our structured scoring approach was designed to evaluate core menopause domains, any quality assessment retains some subjectivity, and different tools (e.g., DISCERN, PEMAT) may yield different absolute estimates [25-28]. Finally, we did not analyze comment sentiment, misinformation themes, or commercial disclosures in a granular way, which may help explain engagement dynamics and should be explored in future research—particularly given documented conflicts of interest in online menopause hormone therapy claims [14].

### CONCLUSION

Menopause-related YouTube videos mainly emphasize symptom explanation, while hormone therapy and lifestyle-focused content is limited. Professional uploaders provide significantly higher-quality information than non-professionals, but engagement metrics (e.g., VPI) do not reflect informational accuracy. Improving access to evidence-based, clinician-led menopause content on YouTube is needed.

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### CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

### AUTHOR CONTRIBUTIONS

BC: Write the article, EÇ: Collect data and supervised.

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