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Full length article

Benchmarking services in outpatient hysteroscopy (OPH): A quality improvement project

Ayesha Mahmud[a,*], Paul Smith[b,c], T. Justin Clark[b,c]

[a] Department of Obstetrics & Gynaecology, Royal Stoke University Hospital, Newcastle Rd, Stoke-on-Trent, ST4 6QG, UK
[b] Department of Obstetrics & Gynaecology, Birmingham Women's & Children's NHS Foundation Trust, Mindelsohn Way, Birmingham, B15 2TG, UK
[c] University of Birmingham, UK

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ABSTRACT

Objective: To develop a survey evaluating women's experience of outpatient hysteroscopy (OPH) to generate data to benchmark OPH practice in the UK that can be used to optimise women's experience of OPH and improve services.
Design: Quality improvement project and a population-based national survey.
Setting: 77 hospitals with outpatient hysteroscopy (OPH) services across the UK collected data over two month-period (October-November 2019).
Population: 5151 women attending for outpatient hysteroscopy.
Methods: A new OPH-Patient Satisfaction Survey (OPH-PSS) was developed using a multi-disciplinary approach. Good practice guidance in hysteroscopy and existing survey's provided content for the survey. Pilot testing identified aspects of the women's OPH journey that contributed to a final survey. The final OPH-PSS was rolled out nationally to generate data for benchmarking OPH services.
Main outcome variable: The adequacy of OPH services reflected in women's experience of their OPH journey and the quality of care being delivered.
Results: The majority (3193, 76 %) of hysteroscopic procedures were recorded as diagnostic. Most (4485, 87 %) women received adequate information regarding their OPH. 4581, 89 % of women agreed that they were given an opportunity to discuss analgesia and 5033, 97 % of women felt involved in their care. As regards patient experience, although pain was reported by most women (4490, 87 %), just over half considered the degree of pain as slight. While (787, 15 %) felt pain throughout their OPH with 1 in 10 women feeling anxious. Although, 1217 (26 %) women experienced feeling faint most only felt this slightly. Overall, more than 90 % (4867) of women considered the OPH service good. The mean score rating for the overall level of care was considerably high (9.7/10). Comparative pain scores for OPH vs the worst pain felt during a menstrual period showed OPH procedures to be less painful except for endometrial ablation ($P < 0.001$).
Conclusion: This novel survey, evaluating women's experience of OPH (OPH-PSS), provides a useful tool for benchmarking performance across different OPH units. Overall, the information provided to women and their subsequent experience of OPH is good, but pain is common.

Introduction

Outpatient hysteroscopy (OPH) is the cornerstone of modern-day ambulatory gynaecological surgery [1]. Hysteroscopy is the gold standard test to diagnose endometrial and structural uterine cavity pathologies associated with abnormal uterine bleeding (AUB) and reproductive failure. Furthermore, newer miniature technologies, have facilitated operative OPH, where many common uterine treatments can be conducted in the outpatient setting at the time of diagnosis; so-called "see and treat" practice; expanded to include procedures such as endometrial ablation, polypectomy and myomectomy [2].

The safety, convenience and efficiency of this common ambulatory procedure is well recognised [2–4]. However, as outpatient hysteroscopy is performed in conscious patients, the pain and acceptability of OPH has been thoroughly investigated and reported using a variety of measures such as pain scores and bespoke, qualitative questionnaires [5–8].

A recent national survey of OPH practice in the United Kingdom highlighted several variations in OPH practice thereby raising

* Corresponding author.
E-mail address: ayesha.mahmud@uhnm.nhs.uk (A. Mahmud).

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questions about women's experience of OPH [9]. In this survey of 142 clinicians performing OPH, 85 % of respondents reported routinely collecting patient feedback. However, 52 % of these respondents reported using the NHS "Friends and family test", a measure that is inherently non-specific to OPH. The survey also demonstrated that there was a lack of standardisation in the assessment of the patient experience of OPH.

The lack of a uniformly accepted OPH tool to assess patient's experience of OPH precludes valid assessment of this common procedure, especially the comparative effectiveness of interventions such as surgical techniques, health technologies, and pharmacological agents in reducing pain and optimising patient experience. Moreover, there have been concerns expressed from patient groups about the variation in the quality of OPH service delivery and women experiencing unacceptable pain during OPH with long-term consequences [10].

We, therefore, developed a questionnaire to evaluate the patient's views and experience of OPH. Furthermore, we disseminated this tool across the UK to assess women's perspective of their experiences of the OPH and to generate data to benchmark OPH practice with the ultimate aim of improving OPH services and optimising the patient experience.

Methods

Development of the OPH-PSS

In collaboration with a multi-disciplinary team of hysteroscopy experts (British Society for Gynaecological Endoscopy (BSGE)), a pilot OPH patient satisfaction survey (OPH-PSS) representing aspects of the OPH journey was created based on current RCOG (Royal College of Obstetricians and Gynaecologists) best practice guidance in OPH [11] with content from existing hysteroscopy surveys. The various steps involved in the development of the OPH-PSS are shown in Fig. 1.

The content for the survey was provided by BSGE members sharing copies of their local OPH questionnaires (4) and from conducting additional internet searches to identify a pool of existing patient experience questionnaires (8). This informed the creation of a draft survey, which was then reviewed by the research team and the hysteroscopy subcommittee of the BSGE and the BSGE Council. Duplicate information was removed as well as formatting and wording finalised for pilot testing.

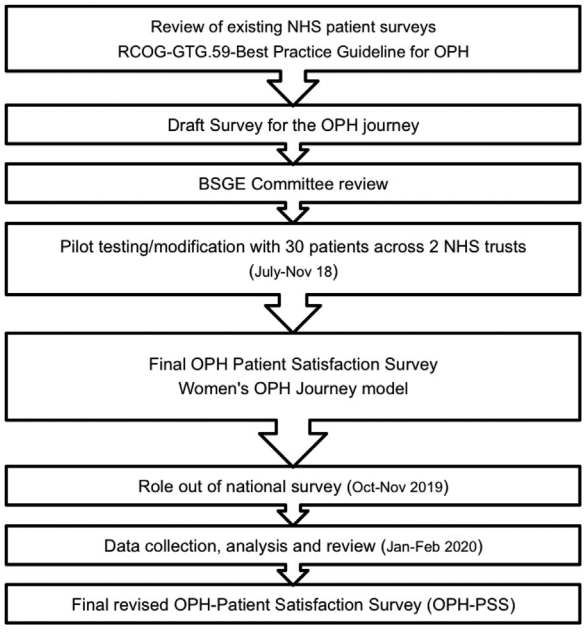

Fig. 1. Development of the OPH-Patient Satisfaction Survey (OPH-PSS).

Pilot testing

Pilot testing involved thirty women attending OPH services (July–Nov 2018) at two different hospital sites (Birmingham Women's and Children's NHS Foundation Trust and Walsall Healthcare NHS Trust) in the West Midlands region of the United Kingdom. Participation was voluntary, and all feedback was anonymous. Women were asked to reflect on the experience of the care they had received while completing the survey, and to provide feedback regarding its content, layout and format of the pilot survey. This afforded the advantage of ensuring that the survey was both appropriate and fit for purpose (i.e. representative of women's experience of outpatient hysteroscopy). Those that agreed to take part were given a copy of the survey to complete post procedure. Feedback was collected in writing (comments section of survey) and face-to-face by the lead author (AM) following the outpatient hysteroscopy appointment.

Women reflected on the care they had received and helped identify areas for improvement including aspects and experiences not covered by the survey. In response to the feedback successive modifications of the survey were completed until no further changes were proposed. This supported the development of a model representative of the aspects of women's OPH journey (Appendix A). For example, a participant commented to say it was important for her to feel her concerns acknowledged without feeling rushed as she felt worried. Consequently, we included the statement- *'I felt able to ask questions and to discuss any worries'*. Similarly, women pointed out that the patient information leaflet did not include information regarding when to expect their results or what to expect from their recovery. Although, this was sometimes covered in the consultation, women felt it was important to capture this information. To reflect this- *'I was given advice regarding my recovery and management plan'* was added as a statement. This meant that 30 different, individual experiences helped shape the final survey before it was rolled out nationally. To continue to improve the survey a free text comment section was retained in the final version to allow women to feedback regarding the form or their experience.

In clinical trials of chronic pain treatments, a measure of pain intensity is often included as the primary outcome measure. To measure pain intensity during OPH and the menstrual period, we selected the widely accepted 11-point (0−10) numerical rating scale (NRS) for pilot testing [12]. Several literature reviews of pain measurement scales and clinical trials of chronic pain treatments recommend the use of the NRS compared to other pain scales (visual analogue scales (VAS), numerical rating scales (NRS), and verbal rating scales (VRS) as a core outcome measure [12–17]. Hence, pilot testing helped provide an understanding of women's OPH journey and facilitated the modification of the pilot survey into its final form.

Four key themes representing women's OPH journey were identified (Appendix A). These included aspects of care representing the continuum of their OPH journey (before, during and after) and their overall experience. The Women's OPH journey model (Appendix A) was used as a template to draft and order the content of the final OPH-PSS. A two-page survey representing women's OPH journey was created, ready for national role out (Appendix B). The final OPH-PSS was shared for feedback with over 100 nurse and medical OPH practitioners who were attending a national BSGE Ambulatory Care Network (ACN) meeting in March 2019 and a national role out to facilitate benchmarking of OPH experience was agreed by the ACN. Minor amendments to the content were made

in response to the ACN feedback at this stage. This included deletion of one duplicate statement and addition of a box to input operator code for appraisal purposes.

Setting

All BSGE members were invited via email and through the BSGE website to participate in a national data collection programme using the OPH-PSS. Participating members were asked to collect data for all women undergoing OPH in their units over two months (from October to November 2019). To avoid investigator bias, participants completed the OPH-PSS after their consultation prior to leaving the hospital or ambulatory unit. Participation was voluntary and all feedback was anonymous.

Data collection

Both electronic (Googleforms®) and paper data collection were used to capture responses to the OPH-PSS. Participating units were advised to use electronic data input where possible but also given the option to post anonymised paper forms to the project team to optimise data collection where human resources to input data electronically were limited.

Statistical analysis

All statistical analysis was performed using SPSS® version 20 (Chicago, IL, USA). Simple frequency tables and proportions were used to present categorical variables. Pain and experience scores were presented as means, standard deviations and 95 % confidence intervals. Following analysis to check the data was normally distributed; comparisons of pain scores between procedure types were performed using the Student *t*-test assuming equal within-group variances.

Results

A total of 5151 patient responses were received from 77 participating units. All data were collected on paper before electronic upload either by the local participating units (1550, 30 %) or following postal submission to the research project team (3601, 70 %).

Type of procedure

The majority of the procedures (3193, 76 %) were recorded as diagnostic (Table 1). Hysteroscopic polypectomy was the most common operative procedure representing 713/1258, 57 % of such procedures. Where more than one type of procedure was undertaken, the procedure was categorised according to the following hierarchy: endometrial ablation > myomectomy > polypectomy > insertion/retrieval IUS > hysteroscopy +/- biopsy.

Procedural pain

A comparison between the type of procedure and associated procedural pain is also reported in Table 1. The mean pain score for diagnostic hysteroscopy with or without endometrial biopsy was 5.2 / 10. Hysteroscopic polypectomy was not associated with greater pain than diagnostic procedures; however, hysteroscopic myomectomy and endometrial ablation were associated with significantly higher pain scores.

Before hysteroscopy

Most women (4485, 87 %) received written information before their appointment. The written information was considered clear and understandable by 3 out of every 4 women. Most women (4200, 82 %) received written information about taking analgesia. Of these, 1 in 5 (18 %) did not take any analgesia. The majority of women (4103, 95 %) considered the waiting area, reception and facilities to be at least good, with more than 45 % of women considering them excellent (Table 2).

During hysteroscopy (about your consultation today)

Women provided feedback regarding different aspects of their consultation (Table 3). Almost all women (5113, 98 %) agreed that staff provided understandable information and that they were able to ask questions and to discuss any worries. Similarly, the vast majority (4581, 89 %), of women agreed that they were offered an opportunity to discuss pain relief.

The majority of women (5113, 98 %) agreed that their questions were satisfactorily answered. In addition, 5033 (97 %) of women agreed that they felt involved in the decisions regarding their care. Nearly all women agreed that they were treated with respect and dignity and given privacy during their consultation. Similarly, almost all women agreed that all aspects of their care were dealt with confidentially. Most women (5099, >90 %) strongly agreed that staff were courteous and polite. Similarly, the vast majority of women agreed that they were advised on their plan for recovery and management (Table 3).

Your experience (considering your expectations of today's consultation)

Taking into account the information that women were provided from the appointment letter or patient information leaflet (PIL)

Table 1
Comparison between type of procedure and procedural pain (N = 5151).

Type of procedure	Number (%)	Mean pain during procedure	95 % confidence interval		Standard Deviation (SD)	Mean difference from control	P value compared to control
			lower bound	upper bound			
Diagnostic hysteroscopy +/- biopsy	3893 (75.6)	5.2	5.12	5.29	2.724	Control	Control
Insertion/Retrieval of IUCD*/ Mirena or Levosert IUS**	449 (8.7)	5.16	4.91	5.41	2.654	−0.039	0.776
Hysteroscopic polypectomy	713 (13.8)	5.1	4.91	5.29	2.59	−0.102	0.358
Myomectomy	30 (0.6)	6.37	5.37	7.36	2.671	1.164	0.02
Endometrial Ablation	62 (1.2)	6.48	5.8	7.16	2.59	1.28	<0.001
Other (RPOC***, adhesiolysis)	4 (0.1)	6.25	4.25	8.25	1.258	1.047	0.442

* Intrauterine Contraceptive Device.
** Intrauterine System.
*** Retained Products of Conception.

Table 2
Women's responses to questions 'Before your Consultation' (n = 5151).

Before your consultation			
Questions	Response options	Number of responses (n)	Percentage (%)
Did you receive any written information (e.g. a leaflet or instructions about where to acquire information e.g. on-line) prior to your appointment?	Yes	4485	87.1
	No	574	11.1
	Yes; No (both selected in error)	4	0.1
	Not answered	88	1.7
Did you feel that the information was clear and understandable? (not applicable if you answered No to the question above)	Yes - I knew what to expect	3923	76.2
	Yes - to some extent	591	11.5
	Not too Sure	88	1.7
	No - wish I knew what to expect	46	0.9
	No - it was not useful	14	0.3
	Not Applicable	256	5
	Not answered	233	4.5
Did you receive advice to take painkillers before the appointment?	Yes - took some	3444	66.9
	Yes - did not take any	756	14.7
	No - wish I had	341	6.6
	No - no need	530	10.3
	Not answered	80	1.5
What did you think of the waiting area, reception and facilities?	Excellent	2417	46.9
	Very Good	1686	32.7
	Good	765	14.9
	Fair	192	3.7
	Poor	8	0.2
	Not answered	83	1.6

before their hysteroscopy, they were asked about their procedural experience (Table 4). Half of all, women (53 %) did not feel any distress during their hysteroscopy. Of those women experiencing distress, most, 6 out of 10, considered the degree of distress as slight. Overall, just over 1 in 10 women experienced at least some distress and nearly 5 in 100 women experienced distress most or all of the time. Most women, >85 %, experienced pain during hysteroscopy. Of those women experiencing pain, just over half considered the degree of pain as slight. Overall, 40 % of women experienced at least some pain, and 15 % of women experienced pain most or all of the time. 70 % of women felt mostly or constantly in control, whilst 1 in 20 women did not feel any semblance of control.

Most women, >60 %, did not feel any embarrassment and of those women who did, most considered the degree of embarrassment as slight. Most women (>70 %), admitted to feeling anxious, most considered the degree of anxiety as slight. Just over 1 in 10 women experienced anxiety most or all of the time. Nearly 24 % of women undergoing OPH felt faint, although most only felt this slightly (Table 4).

Your overall experience

Most women, >90 %, considered the service as at least good with >80 % considering the service excellent. Only 1 in 100 women considered the service as either fair, poor or very poor. When asked if they would choose the outpatient setting if in the same situation again, 90 % agreed, with nearly 7 out of 10 women strongly agreeing. Of those women not agreeing to choose the outpatient setting if in the same situation again, the majority, 6 out of 10, were unsure, neither agreeing nor disagreeing. Approximately 3 in 100 women would not agree to choose the outpatient setting if in the same situation again. The mean score rating for the overall level of care was 9.7/10. (See supplementary information Tables 6, 7 and 8)

Procedural pain compared to menstrual pain

Women rated the discomfort or pain experienced during OPH and that during a menstrual period on a scale of 0–10 (none-worst). On comparison, the mean pain score for an OPH procedure was less than the worst level of pain or discomfort experienced during a menstrual period (Table 5). Data was analysed to assess pain scores specific to the type of OPH procedure. It was observed that the mean pain score for an OPH procedure was less than the worst level of pain or discomfort experienced during a menstrual period for all outpatient hysteroscopic procedures except for outpatient endometrial ablation (Table 5).

Discussion

Main findings

A new OPH patient satisfaction survey (OPH-PSS) was developed in collaboration with the BSGE, with multi-disciplinary input and patient and public involvement (PPI). Women provided feedback and insight regarding their OPH journey leading to the development of a new standardised assessment tool suitable for benchmarking OPH services nationally. In two months, 5151 completed responses were received from 77 Units across the UK. This large return reflects the high prevalence of the procedure in contemporary gynaecological practice and infers the acceptability and utility of the developed survey tool.

The majority of procedures were recorded as diagnostic. The survey was designed to assess all aspects of the patients OPH journey, including pre, peri and post-procedural experiences. The global rating of overall care was extremely high, with a mean score rating of 9.7 out of 10. Over 90 % of women considered the OPH service, they experienced as at least good, with over 80 % considering the service excellent. Consistent with these findings, 90 % agreed that they would choose the outpatient setting if the same situation arose again, with nearly 7 out of 10 women strongly agreeing. These findings suggest that for the vast majority of women, OPH is a safe, tolerable experience. This conclusion is further strengthened by the finding that overall, the mean pain score for OPH was less than the worst level of pain or discomfort experienced during a menstrual period as reported in published literature [4].

The mean pain score for diagnostic hysteroscopy with or without endometrial biopsy was 5.2 / 10, and this intensity of pain was less than the worst pain experienced by women during their

Table 3
Women's responses to questions 'About your Consultation' (n = 5151).

About your consultation			
Questions	Response options	Number of responses (n)	Percentage (%)
Staff explained things in a way I could easily understand.	Strongly Agree	4630	89.9
	Agree	483	9.4
	Neither Agree or Disagree	14	0.3
	Disagree	2	0
	Strongly Disagree	3	0.1
	Not answered	19	0.4
I felt able to ask questions and to discuss any worries.	Strongly Agree	4538	88.1
	Agree	521	10.1
	Neither Agree or Disagree	21	0.4
	Disagree	11	0.2
	Strongly Disagree	3	0.1
	Not answered	57	1.1
I was offered an opportunity to discuss pain relief.	Strongly Agree	3655	71
	Agree	926	18
	Neither Agree or Disagree	390	7.6
	Strongly Disagree	15	0.3
	Disagree	99	1.9
	Not answered	66	1.3
My questions were answered to my satisfaction.	Strongly Agree	4321	83.9
	Agree	707	13.7
	Neither Agree or Disagree	52	1
	Strongly Disagree	4	0.1
	Disagree	4	0.1
	Not answered	63	1.2
I felt involved in the decisions regarding my care.	Strongly Agree	4298	83.4
	Agree	735	14.3
	Neither Agree or Disagree	70	1.4
	Disagree	8	0.2
	Strongly Disagree	4	0.1
	Not answered	36	0.7
I was treated with respect and dignity.	Strongly Agree	4745	92.1
	Agree	332	6.4
	Neither Agree or Disagree	8	0.2
	Disagree	2	0
	Strongly Disagree	2	0
	Not answered	62	1.2
I was given enough privacy.	Strongly Agree	4724	91.7
	Agree	370	7.2
	Neither Agree or Disagree	7	0.1
	Disagree	4	0.1
	Strongly Disagree	2	0
	Not answered	44	0.9
All aspects of my care were dealt with confidentially.	Strongly Agree	4637	90
	Agree	429	8.3
	Neither Agree or Disagree	22	0.4
	Disagree	1	0
	Strongly Disagree	62	12
	Not answered	4637	90
The staff were courteous and polite.	Strongly Agree	4864	94.4
	Agree	235	4.6
	Neither Agree or Disagree	4	0.1
	Disagree	1	0
	Strongly Disagree	1	0
	Not answered	46	0.9
I was given advice regarding my recovery and management plan.	Strongly Agree	4413	85.7
	Agree	577	11.2
	Neither Agree or Disagree	82	1.6
	Disagree	9	0.2
	Strongly Disagree	5	0.1
	Not answered	65	1.3

menstrual periods. It should be noted the most common operative procedure of polypectomy was not associated with greater pain than diagnostic procedures. Procedure specific data for other OPH procedures such as myomectomy and endometrial ablation were too limited to draw any conclusions.

In our study although most women experienced pain, over half considered this to be slight. However, 15 % of women reported feeling pain nearly all the time. Whilst women's experience of OPH was variable, most did not experience substantial levels of pain, distress, anxiety, or embarrassment and felt in control. Vaso-vagal reactions from stimulation of the cervix are one of the most common side-effects of OPH [11], but 70 % of respondents did not report feeling faint, and most women that did report this symptom felt the intensity as slight. Our findings are in keeping with the published research literature.

Before their consultation, the majority of women reported receiving written information in a clear and understandable format that included material about taking analgesia. These findings show that current patient information leaflets are fit for purpose. Standardised patient information leaflets (PILs) are

Table 4
Women's responses to questions 'Your experience' (n = 5151).

YOUR EXPERIENCE (CONSIDERING YOUR EXPECTATIONS OF TODAY'S CONSULTATION)			
Questions	Response options	Number of responses (n)	Percentage (%)
Did you feel distressed?	Not at all	2747	53.3
	Slightly	1591	30.9
	Somewhat	429	8.3
	Mostly	161	3.1
	Constantly	63	1.2
	Not answered	160	3.1
Did you feel pain?	Not at all	464	9
	Slightly	2456	47.7
	Somewhat	1247	24.2
	Mostly	643	12.5
	Constantly	144	2.8
	Not answered	197	3.8
Did you feel in control?	Not at all	276	5.4
	Slightly	420	8.2
	Somewhat	550	10.7
	Mostly	1361	26.4
	Constantly	2282	44.3
	Not answered	262	5.1
Did you feel embarrassed?	Not at all	3345	64.9
	Slightly	1120	21.7
	Somewhat	338	6.6
	Mostly	89	1.7
	Constantly	56	1.1
	Not answered	203	3.9
Did you feel anxious?	Not at all	1257	24.4
	Slightly	2314	44.9
	Somewhat	799	15.5
	Mostly	405	7.9
	Constantly	219	4.3
	Not answered	157	3.1
Did you feel faint	Not at all	3762	73
	Slightly	830	16.1
	Somewhat	255	5
	Mostly	108	2.1
	Constantly	24	0.5
	Not answered	172	3.3

Table 5
Pain experienced with outpatient hysteroscopy compared to the worst level of discomfort or pain experienced during a menstrual period (n = 5151).

What would be the worst level of discomfort or pain you might experience (or used to experience) during a period on a scale of 0–10:	Mean		5.51
	95 % Confidence Interval for Mean	Lower Bound	5.44
		Upper Bound	5.58
	Median		6
	Std. Deviation		2.648
	Interquartile Range		4
What level of discomfort or pain you experienced during the procedure on the same scale of 0–10:	Mean		5.22
	95 % Confidence Interval for Mean	Lower Bound	5.14
		Upper Bound	5.29
	Median		5
	Std. Deviation		2.694
	Interquartile Range		4

available via the RCOG [18] and newer alternative video-information resources are becoming available [19]. It is important that such resources are updated regularly to reflect current guidance, which may change as more evidence becomes available.

Overall, almost all women felt that aspects of their consultation were dealt with appropriately. Communication seemed of a high standard, with most women reporting feeling at ease, with their concerns being addressed and staff treating them with respect and dignity. The vast majority of women had the opportunity to discuss pain relief and were given adequate post-procedural advice.

Revised final OPH-PSS

The results of the OPH-PSS survey were shared for feedback with over 150 nurse and medical OPH practitioners who were attending a national BSGE Ambulatory Care Network (ACN) meeting in March 2020. Participants suggested a minor amendment to the location of the patient procedural information collection box. This was moved from the back of the survey to the front to avoid the risk of missing data during future data collection. Generally, they found the survey easy to use for data collection.

Strengths and limitations

The strength of this project lies in its women-centred, multidisciplinary approach with PPI involvement in the development of a new OPH-PSS. The tool was designed to be comprehensive, covering all aspects of the OPH experience and not simply restricting evaluation to the procedure itself. Content from existing patient survey's provided a tried and tested baseline pool of

questions that were later pilot tested with women undergoing OPH. Focus groups were not undertaken as part of survey development instead individual responses from women helped shaped the survey. This approach benefited the opportunity to modify and improve the survey while constantly seeking input from women resulting in a survey that is embedded in women's experience of their OPH journey. Feedback from women experiencing the OPH journey provided face validity while consultation with clinical experts supported content validity of the new OPH-PSS. In this way, valid information was acquired pertaining to the quality of care before, during, and after the procedure. Moreover, the sample is, to our knowledge, by far the largest obtained evaluating women's experience of OPH. The large sample allowed the generation of precise estimates for various outcomes and with 77 different UK hospitals, providing data enhances the generalisability of these findings.

Although pilot testing was able to rectify most issues with the OPH-PSS procedural information was found to be missing in 680 (13.2 %) submitted forms. For the purpose of analysis, it was assumed that all patients, where the specific hysteroscopic procedure was not defined, had a diagnostic hysteroscopy procedure performed. This assumption was conservative but may have led to an overestimate of pain associated with diagnostic procedures. Furthermore, OPH alone was not a response option on the survey, rather OPH with or without an endometrial biopsy. Endometrial biopsy is known to be more painful than OPH [20], and so again, the average pain associated with diagnostic OPH may have been exaggerated. To avoid similar issues in the future, the final OPH-PSS has been modified to include procedural details at the beginning of the survey for staff to complete before seeking patient feedback, and diagnostic OPH without endometrial biopsy is a specific response category.

Comparison with prior literature

The intensity of pain experienced for diagnostic and operative hysteroscopic procedures is in keeping with the published literature [6–8]. It is recognised that patient factors such as anxiety, pain, and dissatisfaction with aspects of OPH can offset the advantages of using an OPH service for a significant minority of women [21–23]. Whilst most women felt anxious, the majority considered the level of anxiety to be slight. A smaller study evaluating anxiety among 240 women attending an OPH clinic showed that 20 % of women felt very anxious. Our data showed rates of high anxiety to be lower at 12 % and this may reflect greater familiarity with the procedure amongst health care professionals.

Implications for clinical practice and research

The modified survey should be made readily visible (for example on the BSGE website for download [https://www.bsge.org.uk]) and available for use by OPH units to allow comparison and benchmarking. In this way, areas of good practice can be highlighted, and explanations for excellent performance explored and shared with the wider gynaecological community. Conversely, areas of sub-optimal performance can be more readily identified, enquiries instigated and remedial measures put in place, such as rectifying staffing, infrastructure or equipment deficiencies, changing appointment schedules, improving patient information and offering additional clinician training, as appropriate.

To optimise the acquisition of comprehensive, real-life data we made it explicit to participating centres that data would be published anonymously so that specific centres were not identified. However, all participating centre have access to their individual performance and they will have access to the average performance across all the centres from the BSGE website for benchmarking their performance. Time will tell if use of this tool, and knowledge of specific centre or individual practitioner outcomes, will enhance performance and outcomes for women. We anticipate that the OPH-PSS will facilitate engagement with women in all aspects of their outpatient hysteroscopic journey and improve women's experiences. Furthermore, future studies could evaluate construct validity for example the construct that training centres or centres with high compliance to national guidelines would perform better according to the OPH-PSS.

The national survey should be repeated within the next 2–5 years to evaluate whether the overall practice has improved as gauged from the mean scores/responses acquired compared to the index survey conducted at the end of 2019. Further work is needed to produce the OPH-PSS in other languages to ensure that the experience of all the UK community is obtained and to allow the use of the survey internationally enhancing generalisability further and acquiring global perspectives. The current survey was set within the setting of NHS hospital outpatient hysteroscopy units. However, in light of the widespread practice of outpatient hysteroscopy in contemporary gynaecology, the OPH-PSS could be adapted for use internationally. Although the structure of health care services in other countries may differ, the aspects of women's OPH journey are likely to be similar. Translation into other languages with pilot testing for acceptability and generalizability would be needed to facilitate implementation in other countries. The OPH-PSS should also be formatted electronically for completion to aid wider dissemination.

Psychometric evaluation of the survey was not intended as part of this development. However, this could be undertaken in the future, for example, as part of a large randomised controlled trial where patient experience of OPH is captured using the OPH-PSS as a patient outcome along with other instruments measuring similar constructs.

The exploration of potential reasons behind the individual scores of participating women was beyond the scope of this project. However, qualitative research could be targeted at women reporting poor experiences, especially relating to the experience of unacceptable pain during hysteroscopy.

Conclusion

We have developed a new women-centred outpatient hysteroscopy patient satisfaction survey (OPH-PSS) suitable for routine use in outpatient hysteroscopy. This survey has provided important insight towards women's experiences of OPH. It remains a useful resource for clinicians practising OPH and for benchmarking performance across different units. This will allow centres to not only collect and report data on patient satisfaction for their OPH services but also to help identify gaps for improving services and be used for local appraisal and training. Locally, units may find it helpful to integrate the questionnaire within their routine OPH service structure.

Contribution to authorship

TJC conceived the study. AM planned and carried out the project under TJC's guidance. PS performed the statistical analysis. AM, PS and TJC carried out data interpretation. AM drafted the manuscript. TJC and PS provided comments and contributed to the development of the final version of the manuscript.

Details of ethics approval

Formal ethical approval was not sought because this was a service improvement project and questionnaires were fully anonymised.

Declaration of Competing Interest

AM, PS and TJC have nothing to disclose. Completed disclosure of interest forms will be available to view online as supporting information.

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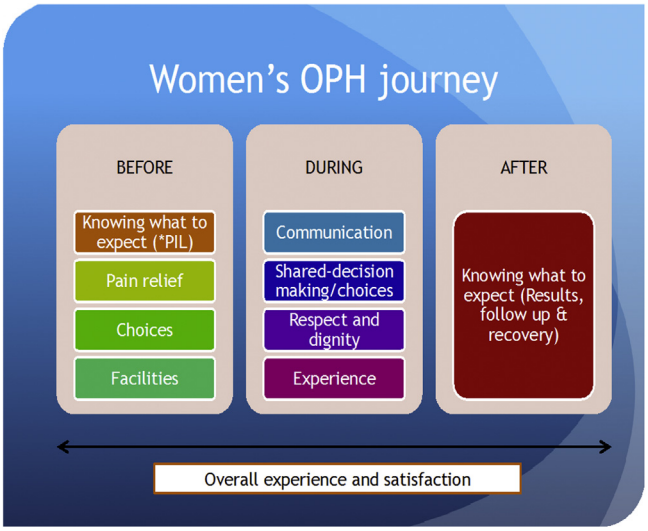
Appendix A. Women's Outpatient Hysteroscopy (OPH) Journey

*Patient Information leaflet.



Appendix B.

The Outpatient Hysteroscopy-Patient Satisfaction Survey (OPH-PSS)

Outpatient Hysteroscopy - Patient Satisfaction Survey *(OPH-PSS)*

Procedural information (STAFF USE ONLY): (Please tick all that apply)			
Diagnostic Hysteroscopy+/- biopsy	☐	Myomectomy	☐
Hysteroscopic biopsy	☐	Endometrial Ablation	☐
Hysteroscopic polypectomy	☐	Other (Please Specify)	☐
Insertion/Retrieval of IUCD/Mirena/Levosert IUS	☐	Staff code	_____

We would appreciate your comments on the service you received today to help improve our services. This data will also be used to compare our service with the results of others around the country; all data that is recorded by us or nationally is anonymous and untraceable. The answers you provide will be anonymous, completely confidential and your participation is voluntary. If you have any questions about this survey please ask a member of staff.

Thank you for your help

Before your consultation					
Did you receive any written information (e.g. a leaflet or instructions about where to acquire information e.g. on-line) prior to your appointment?			Yes ○	No ○	
Did you feel that the information was clear and understandable? (leave blank if you answered "No" to the question above)	Yes – I knew what to expect ○	Yes- to some extent ○	Not too sure ○	No- wish I knew what to expect ○	No- it was not useful ○
Did you receive advice to take painkillers before the appointment?	Yes – took some ○	Yes – did not take any ○	No– wish I had ○	No – no need ○	
What did you think of the waiting area, reception and facilities?	Excellent ○	Very Good ○	Good ○	Fair ○	Poor ○

About your consultation today					
Staff explained things in a way I could easily understand.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
I felt able to ask questions and to Discuss any worries	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
I was offered an opportunity to discuss pain relief.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
My questions were answered to my satisfaction.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
I felt involved in the decisions regarding my care.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
I was treated with respect and dignity.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
I was given enough privacy.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
All aspects of my care were dealt with confidentially.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
The staff were courteous and polite.	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○
I was given advice regarding my recovery and management plan	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○

Outpatient Hysteroscopy - Patient Satisfaction Survey *(OPH-PSS)*

Your experience (considering your expectations of today's consultation)					
Did you feel distressed?	Not at all ○	Slightly ○	Somewhat ○	Mostly ○	Constantly ○
Did you feel pain?	Not at all ○	Slightly ○	Somewhat ○	Mostly ○	Constantly ○
Did you feel in control?	Not at all ○	Slightly ○	Somewhat ○	Mostly ○	Constantly ○
Did you feel embarrassed?	Not at all ○	Slightly ○	Somewhat ○	Mostly ○	Constantly ○
Did you feel anxious?	Not at all ○	Slightly ○	Somewhat ○	Mostly ○	Constantly ○
Did you feel faint?	Not at all ○	Slightly ○	Somewhat ○	Mostly ○	Constantly ○

Your overall experience					
Overall, how was your experience of our service?	Excellent ○	Good ○	Fair ○	Poor ○	Very Poor ○
I would choose this way of having the procedure if I were in the same situation again?	Strongly Agree ○	Agree ○	Neither Agree or Disagree ○	Disagree ○	Strongly Disagree ○

Please indicate (✓) what would be the worst level of discomfort or pain you might experience (or used to experience) during a period on a scale of 0-10:

0	1	2	3	4	5	6	7	8	9	10
No Pain					**Moderate pain**					**Worst pain**

Please indicate (✓) what level of discomfort or pain you experienced during the procedure on a scale of 0-10:

0	1	2	3	4	5	6	7	8	9	10
No Pain					**Moderate pain**					**Worst pain**

Please indicate (✓) How would you *rate the care* you received? On the same 0-10 scale:

0	1	2	3	4	5	6	7	8	9	10
Bad					**Neither good nor bad**					**Excellent**

Any further comments on your experience or suggestions for improvement?

Appendix C. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.ejogrb.2021.01.028.

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