ORIGINAL ARTICLE: INNOVATIONS

Using virtual reality distraction and disassociation in adult gastrointestinal endoscopy: a pilot study

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Background and Aims: Improving patient experience during endoscopy is crucial to improving patient attendance and feedback. We aimed to explore the feasibility of virtual reality distraction and disassociation (VRDD) in patients having unsedated upper gastrointestinal (UGI) endoscopy and measure their experience.

Methods: Two-stage pilot feasibility trial at a single site in northeast England, recruiting patients having elective diagnostic UGI endoscopy (transnasal or oral route). Patients having therapeutic or emergency procedures were excluded. The target sample size was 30 participants. The primary objective was to ascertain the acceptability and tolerability of VRDD. In stage 1, participants wore a virtual reality (VR) headset for 10 minutes before endoscopy and completed questionnaires about their experience. Participants having unsedated transnasal endoscopy progressed to stage 2. They wore a VR headset during endoscopy and completed questionnaires after the procedure. Descriptive analyses were performed on collated questionnaire responses.

Results: The recruitment period spanned January to August 2024. Thirty participants were recruited, and all completed their questionnaires. Ninety-three percent of participants rated the overall endoscopy experience as "very good" or "excellent." In stage 1, 97% did not encounter issues during and after VR, with 83% finding VRDD acceptable and enjoyable. In stage 2, 83% encountered no issues, 75% thought VRDD was acceptable and enjoyable, and 67% thought it was a good distraction technique. Eighty-three percent would choose VRDD again for future procedures.

Conclusions: Our pilot study suggests that VRDD is acceptable and well-tolerated by adults undergoing unsedated UGI endoscopy. We need future research involving larger controlled trials to determine whether it is a suitable alternative for patients who cannot have sedation. (iGIE 2026;■:1-5.)

BACKGROUND AND AIMS

Gastrointestinal endoscopy is a very commonly performed procedure in adults in the United Kingdom and worldwide, especially upper gastrointestinal (UGI) endoscopy. There is a rising demand to perform UGI endoscopies for diagnostic, surveillance, and therapeutic purposes, and it is increasingly common for patients to require several procedures in their lifetime, such as those with Barrett's esophagus, esophageal strictures, gastric intestinal metaplasia or dysplasia, esophageal or gastric ulceration, and rarely, polyposis syndromes. Data from the UK national census and National Endoscopy Database from 2019 to 2021 reported that the total number of UGI endoscopy procedures performed annually was approximately 600,000 to 900,000.[1-3] These are estimated to continue rising.[4]

As a result, more effort and resources have been invested in improving endoscopy practices, such as the endoscopist's technical and nontechnical skills, improving sedation practice alongside a robust quality improvement process. Within this initiative, ensuring that patients have a positive experience during UGI endoscopy was recognized as crucial to reducing nonattendance rates, maximizing existing service capacity, and improving patient adherence to surveillance programs, besides minimizing cases needing general anesthesia (GA) and operating theater space.

There is an increasing focus on designing tools to accurately measure patient experience and capture their feedback. Hence, Neilson et al[5] developed a validated patient-reported experience measure (PREM), the Newcastle ENDOPREM, which is now widely used nationally to gauge patients' experience during GI endoscopy. We intend to combine these 2

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elements by finding ways to improve patient experience during UGI endoscopy while using validated tools to accurately measure and present it.

The use of virtual reality (VR) has expanded out of the gaming world into other sectors. In health care, its use—VR distraction and disassociation (VRDD)—has been hypothesized as a novel distraction technique during interventional procedures to relieve pain, discomfort, and anxiety. A meta-analysis of 21 studies by Yao et al[6] found that VR use reduced general pain scores in patients undergoing colonoscopy (standardized mean difference [SMD] = −0.70), cystoscopy (SMD = −0.28), and laparoscopy (SMD = −0.54). Patients also reported decreased anxiety levels (SMD = −0.56) when using VR.[6] Another systematic review of 16 studies by Boyce et al[7] found that VR use significantly improved procedural anxiety and reduced pain levels in patients undergoing awake invasive procedures, that is, endoscopy or minor surgery. The VR cohort also reported higher patient satisfaction scores, but these were not statistically significant ($P = .07$).

Kim et al[8] demonstrated that pre-endoscopy VR exposure reduced patient anxiety levels and increased their satisfaction with sedation. Of note, all 40 patients underwent prolonged procedures, that is, endoscopic submucosal dissection of gastric lesions and endoscopic mucosal resection or endoscopic submucosal dissection of colonic lesions. This suggests that VR has a calming effect in patients having to tolerate complex and prolonged invasive procedures, besides enhancing the therapeutic effect and benefit of sedation in these patients.

To date, the evidence for VRDD in endoscopy is fairly limited but promising in certain aspects. Researchers have looked at how VR use improves patient experience of both UGI endoscopy and colonoscopy in adults and children, but these were smaller-scale studies. Specifically, the evidence for VR use in UGI endoscopy is mixed, as elaborated on later; this evidence void formed the basis for the study's conception. If VRDD is proven to be acceptable before and during unsedated UGI endoscopy in the adult UK population, future larger studies could be done to test its effectiveness as a distraction technique to improve patient experience. We aimed to explore the feasibility of using VRDD in adult patients undergoing unsedated UGI endoscopy and to measure the patient experience.

METHODS

This was a prospective nonrandomized pilot feasibility trial involving a single research-active site, South Tyneside District Hospital, South Shields, England. The endoscopy unit is accredited by the Joint Advisory Group for endoscopy. It was registered on ClinicalTrials.gov (NCT06636292) and approved by the UK Health Research Authority and Hampshire B Research Ethics Committee (Integrated Research Application System [IRAS] project 323884).

The trial comprised 2 stages and recruited adult participants aged 18 years and older. Patients who were referred for elective diagnostic UGI endoscopy (transnasal or oral route) were eligible. Our target sample size was 30 participants. The primary outcome measure was to determine the acceptability and tolerability of using VRDD as a distraction technique in all adult patients referred for UGI endoscopy. Secondary outcome measures were to determine the acceptability of using VRDD in adult patients who underwent unsedated transnasal endoscopy (TNE) and to measure the patient experience of undergoing unsedated TNE while using VRDD. Exclusion criteria for patients were (1) planned therapeutic procedures (including, but not limited to, polypectomy, balloon dilatation, and stent placement); (2) referred for urgent or emergency GI endoscopy; (3) uncorrected visual or auditory impairments or adaptions (eg, spectacles) that make wearing the VR equipment difficult; (4) cognitive impairment or learning disabilities; (5) epilepsy; and (6) balance disorders.

Participants were identified from prescheduled endoscopy lists and approached by the research team on the day of their procedure to confirm enrollment in the trial via written consent. Efforts were made to recruit patients having TNE and peroral gastroscopy in equal numbers as feasible. All recruited patients entered stage 1; patients having unsedated TNE had the option to enter stage 2 if they agreed.

In stage 1, before endoscopy, all participants were assisted in putting on the VRDD equipment, comprising a single-use VR headset called the Patient Experience Kit (EvoEndo, Inc, Centennial, Colo, USA) and a Google Pixel 6a smartphone (Foxconn, New Taipei City, Taiwan), both provided by EvoEndo, Inc. The VR content consisted of videos showing a variety of documentaries on science, nature, and animals. These were intended to be calming and relaxing in nature. Participants were able to select what they preferred to watch during their VRDD experience. The smartphone was reusable and returned to EvoEndo, Inc, whereas participants kept the VR headset. This was attached to them for 10 minutes (the approximate time required to undertake UGI endoscopy) under the supervision of a research team member. After the VRDD equipment was removed, participants were observed for another 10 minutes for any adverse effects before they proceeded to endoscopy. This completed stage 1. Participants having peroral gastroscopy or those wanting to have sedation regardless of their type of UGI endoscopy ended study participation at stage 1.

In stage 2, only participants having unsedated TNE were recruited. The VRDD equipment was reattached to participants for the duration of their procedure and observed for 10 minutes after the procedure for any adverse effects. This completed stage 2.

All participants were given 3 questionnaires: the modified Group Health Association of America-9 (mGHAA-9) survey, our self-designed VRDD questionnaire (Appendix 1), and the Newcastle ENDOPREM to complete at home within 7 days after the procedure. Data from questionnaire responses were collated by the research team and transcribed electronically onto a secure database. The end of the study was defined

as the date of the last visit of the last participant and by completion of data collection from the questionnaires.

As this was a pilot feasibility trial with a small sample size, no power calculations were performed. Descriptive analyses were carried out on data from both stages.

RESULTS

Our recruitment period spanned January to August 2024. Ninety patients were screened in total; of these, 30 patients consented and were recruited (16 male and 14 female). Eighteen participants (60%) only entered stage 1, whereas 12 participants (40%) entered both stages 1 and 2. Overall, participants' mean age was 58.1 years (standard deviation [SD] = 10.6), and median age was 58 years (interquartile range [IQR] = 13.8). There was no significant difference in the mean age between stages 1 and 2 (P = .26). Patient demographics are presented in Table 1. No participants were withdrawn or lost to follow-up. All participants returned their questionnaire responses. No serious adverse events were reported.

Endoscopy experience

On the mGHAA-9, 93% of participants rated their overall endoscopy experience as "very good" or "excellent." Specifically, they rated the personal manner of endoscopy unit staff and the technical skills of the endoscopist as "very good" or "excellent." Overall, 96.7% were very satisfied with the adequacy of explanation received and would have a repeat procedure at our endoscopy unit. This is despite 20% rating the waiting time length for their procedure as "poor."

Newcastle ENDOPREM. Ninety-six percent chose "agree" or "strongly agree" for their satisfaction with the overall endoscopy experience. In the preprocedure section, all participants chose "agree" or "strongly agree" when asked about the adequacy of preprocedural information and instructions, their comfort levels within the endoscopy unit, and having their privacy respected. They were also satisfied with being able to ask questions and receiving satisfactory answers. Similar to mGHAA-9 responses, 26.7% thought that the waiting time length for their procedure was unacceptable.

In the intraprocedure section, all participants chose "agree" or "strongly agree" for their confidence in the endoscopist. They felt the endoscopist and other staff members helped put them at ease. They were all satisfied with the explanation given about their procedure and felt their concerns were addressed. Nevertheless, 33.3% experienced more pain than expected—the mean pain score was 2.3 of 10 (SD = 2.6); 46.7% experienced more discomfort than expected—the mean discomfort score was 4.2 of 10 (SD = 2.7).

In the postprocedural section, 43.3% reported worrying about their test results, but all participants chose "agree" or "strongly agree" for the endoscopist's explanation and understood the next management steps.

Specifically for participants in stage 2, 91.7% chose "agree" or "strongly agree" for their satisfaction with the overall endoscopy experience. All participants had positive preprocedural and intraprocedural experiences. Only 1 participant (8.3%) found the waiting time length unacceptable. A total of 16.7% experienced more pain than expected; 8.3% experienced more discomfort than expected. Mean scores for both were 4 of 10 (SD = 2.9). In addition, 16.7% were worried about their test results, but all of them were satisfied with the endoscopist's explanation and understood the next management steps.

VRDD experience

Twenty-three percent of participants had prior experience of using VR for other purposes. In addition, 36.7% said that they would pay to use VRDD during endoscopy. Participant experiences of VRDD in both stages are presented in Table 2.

Stage 1. The mean duration of VR use was 14 minutes (SD = 6), and the median duration was 10 minutes (IQR = 5). Overall, 96.7% did not encounter issues during and after VR. Ninety percent chose "agree" or "strongly agree" when asked whether the VR headset was comfortable to wear. In addition, 83.3% agreed that VRDD was enjoyable, and 90% agreed that it was acceptable to them. Ninety percent would choose VRDD again for future UGI endoscopy procedures.

Stage 2. The mean duration of VR use was 15 minutes (SD = 9), and the median duration was 11 minutes (IQR = 13.5). Overall, 83.3% did not encounter issues during and after VR. Two participants (16.7%) experienced issues with nausea and not knowing what was happening outside. There were no reports of dizziness, claustrophobia, disorientation, eye strain, or any discomfort while wearing the VR headset. In addition, 66.7% agreed that VRDD was a good distraction technique during endoscopy, 75% agreed that it was both acceptable and enjoyable, and 83.3% would choose VRDD again for future unsedated TNE procedures.

Additional participant comments from both stages centered around how VRDD was a good distraction to make them feel more relaxed and reduced their fear and anxiety levels.

DISCUSSION

In standard UK practice, adult patients undergoing UGI endoscopy can choose to have local anesthesia (lidocaine nasal or throat spray), intravenous sedation (fentanyl and/or midazolam), or, rarely, GA to improve their tolerance and experience of the procedure. Intravenous sedation is generally considered safe and is widely used, but it carries a small risk of serious adverse events like respiratory depression, hypotension, or anaphylaxis, estimated to be 0.38%.[9] Equally, GA carries its own risks and is used in a selected group of adults and mainly pediatric patients. VRDD is less resource-intensive and could be an innovative adjunctive option for adult patients. It is

TABLE 1. Participant demographics

Demographics	Stage 1 only (n = 18)	Stage 2 (n = 12)
Age, mean (SD)	56.3 (11.1)	60.8 (11.3)
Gender		
Male, n (%)	11 (61.1%)	5 (41.7%)
Female, n (%)	7 (38.9%)	7 (58.3%)
Medical history		
None, n (%)	7 (38.9%)	3 (25%)
Hypertension, n (%)	4 (22.2%)	5 (41.7%)
Cardiac or lung conditions, n (%)	0 (0%)	2 (16.7%)
Diabetes, n (%)	4 (22.2%)	3 (25%)
Eye conditions, n (%)	2 (11.1%)	2 (16.7%)
Migraines, n (%)	3 (16.7%)	1 (8.3%)
Previous endoscopy		
None, n (%)	7 (38.9%)	7 (58.3%)
Transnasal endoscopy, n (%)	0 (0%)	1 (8.3%)*
Gastroscopy, n (%)	11 (61.1%)	5 (41.7%)

SD, Standard deviation.
*Patient previously had both transnasal endoscopy and gastroscopy.

TABLE 2. Participants' experience of VRDD in stages 1 and 2

Questionnaire responses	Yes, n (%)	Neutral, n (%)	No, n (%)
Stage 1 (*n* = 30)			
VRDD acceptable?	27 (90%)	3 (10%)	0
VRDD enjoyable?	25 (83.3%)	4 (13.3%)	1 (3.3%)
Choose VRDD in the future?	27 (90%)	–	3 (10%)
Stage 2 (*n* = 12)			
VRDD good distraction?	8 (66.7%)	3 (25%)	1 (8.3%)
VRDD acceptable?	9 (75%)	2 (16.7%)	1 (8.3%)
Choose VRDD in the future?	10 (83.3%)	–	2 (16.7%)

–, Not available; *VRDD*, virtual reality distraction and disassociation.

especially useful for those who cannot have sedation or GA because of personal circumstances or comorbidities but cannot tolerate UGI endoscopy with only local anesthesia.

Despite the literature showing a positive impact of VR use in GI endoscopy, it is less convincing when we specifically look at upper GI endoscopy. Many studies had small sample sizes and used nonvalidated patient scores or PREM. Patients' experience was limited to only measuring procedural anxiety and pain levels rather than the overall endoscopy experience. By using the Newcastle ENDOPREM, a validated and more comprehensive tool, we adopted a more standardized approach to measure our patients' experience. Literature on VR use in UGI endoscopy has shown mixed results. Mosso Vázquez et al[10] reported significantly lower pain scores in patients and lower endoscopist stress scores in the VR group. However, two other randomized controlled trials showed no significant difference in patient discomfort, pain, or anxiety levels with VR.[11,12] Boonreunya et al[11] also found no significant difference in patient and endoscopist satisfaction scores in the VR group compared with the control group.

In the pediatric sector, Friedlander et al[13] and Nguyen et al[14] found that VRDD use during unsedated TNE was safe and effective for disease monitoring and had lower costs and high satisfaction ratings from patients and their parents. Overall, 76.2% of children would have a repeat procedure, and all parents were willing to let their children use VRDD again.

The more favorable results were largely from adult patients undergoing colonoscopy. Blokzijl et al[15] reported that 25.7% of their surveyed 326 patients preferred VR over sedation. Another Dutch study by Veldhuijzen et al[16] found that patients were accepting of the VR headset during colonoscopy. A meta-analysis by Zhang et al[17] looking at the effects of VRDD reported significantly lower pain levels, higher patient satisfaction scores, and increased willingness to have repeat procedures. Liu et al[18] found similar results in their study, with a significant decrease in the colonoscopy duration and difficulty in the VR group. Other advantages of VR were reported by Veisman et al[19]—a lower rate of postcolonoscopy adverse events, reduced time in hospital, and quicker return to daily activities for patients. For comparison, a single-center Belgian study by Pavlidi et al[20] reported that VRDD was inferior compared with intravenous deep sedation with propofol during colonoscopy, recording higher pain and lower patient comfort scores in the VR cohort. This facility is, however, neither common practice nor routinely available in the United Kingdom.

Our results showed that most of our participants thought VRDD was an enjoyable and acceptable distraction technique, despite them lacking prior VR experience. They stated that they would choose VRDD again for future procedures. Reassuringly, there were no major adverse events reported during or after VRDD, hence demonstrating its safety and effectiveness. The VR equipment was easy to use and did not present any logistical difficulties. In addition, the positive endoscopy experience reported by stage 2 participants in the Newcastle ENDOPREM is reaffirming and encouraging.

Overall, this pilot feasibility trial has been a success. One of its main strengths was the simple and straightforward study design and methodology. We achieved a good screen-to-recruit ratio of approximately 3:1 and 0% dropout rate. The ease of recruitment, because of relatively nonrestrictive eligibility criteria, allowed us to recruit potential participants from a large pool of patients. We met our recruitment target within the expected timeframe. Trial delivery was easy because we did not have multiple follow-up visits, contributing to the excellent participant retention and completion rates. We had 100% questionnaire completion rates and no ambiguous

or missing data. Moreover, the validated Newcastle ENDOPREM has good transferability onto future controlled trials involving different forms of GI endoscopy and larger sample sizes. We do not anticipate any additional barriers, even with the addition of a randomization process or several study arms, because the participant research journey will be quite similar.

One of the limitations that we identified from the trial was the small sample size. We accepted that power calculations were not reliable because of this and, hence, were not carried out. We also acknowledged that there was a potential for bias and statistical errors in our results because of the sample size, despite the overall positive outcome of VRDD.

Our initial results from the pilot trial suggest that VRDD is acceptable and well-tolerated by adult patients undergoing unsedated TNE. This would help inform future and larger controlled trials to investigate the effectiveness of VRDD as a distraction technique in patients who are having unsedated TNE, peroral gastroscopy, and colonoscopy, besides measuring the patient experience of GI endoscopy using a validated PREM. Future research should help us determine whether VRDD is indeed a viable alternative for patients who struggle to tolerate GI endoscopy but are unable to have sedation or GA because of personal or safety reasons.

PATIENT CONSENT

Participants were approached by the research team on the day of their procedure to confirm enrollment in the trial via written consent.

DISCLOSURE

The following author disclosed financial relationships: S. Panter: Unpaid consultant for EvoEndo, Inc. All other authors disclosed no financial relationships.

Abbreviations: GA, general anesthesia; IQR, interquartile range; mGHAA-9, modified Group Health Association of America-9; PREM, patient-reported experience measure; SD, standard deviation; SMD, standardized mean difference; TNE, transnasal endoscopy; UGI, upper gastrointestinal; VR, virtual reality; VRDD, virtual reality distraction and disassociation.

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APPENDIX 1

Virtual reality distraction and disassociation acceptability questionnaire _____

1. What medical conditions do you have in the background? (please select as appropriate; you can tick more than one)

☐ None
☐ Eye conditions, please elaborate: _____
☐ Ear conditions, please elaborate: _____
☐ Migraine
☐ High blood pressure
☐ Heart or lung disease
☐ Diabetes
☐ Previous stroke or transient ischemic attack
☐ Other, please elaborate: _____

2. Have you ever had any prior experience in using virtual reality (VR) goggles, such as for gaming?

☐ Yes
☐ No

Stage 1

3. Time when VR headset was put on:_____
Time when VR headset was removed: _____

4. Did you encounter any issues with virtual reality distraction and disassociation (VRDD) during the 10 minutes from when you STARTED wearing the VR headset?

☐ Yes
☐ No

5. Did you encounter any issues with VRDD in the following 10 minutes AFTER the VR headset was removed?

☐ Yes
☐ No

6. If so, what were these issues? (please select as appropriate; you can tick more than one)

☐ Nausea
☐ Dizziness
☐ Claustrophobia
☐ Disorientation
☐ Eye strain and trouble focusing
☐ Not knowing what is happening outside
☐ Uncomfortable to wear
☐ Other, please explain: _____

7. (a) If you experienced nausea, please rate its severity.(1: very mild; 5: very severe)

1 2 3 4 5

(b) When did your symptoms start? Please indicate the time._____

(c) How long did this last for?

☐ <5 minutes
☐ 5-30 minutes
☐ 30 minutes-1 hour
☐ 1-2 hours
☐ >2 hours

8. (a) If you experienced dizziness, please rate its severity.
(1: very mild; 5: very severe]

1 2 3 4 5

(b) When did your symptoms start? Please indicate the time._____

(c) How long did this last for?

☐ <5 minutes
☐ 5-30 minutes
☐ 30 minutes-1 hour
☐ 1-2 hours
☐ >2 hours

9. a) If you experienced disorientation, please rate its severity.
(1: very mild; 5: very severe)

1 2 3 4 5

b) When did your symptoms start? Please indicate the time._____

c) How long did this last for?

☐ <5 minutes
☐ 5-30 minutes
☐ 30 minutes-1 hour
☐ 1-2 hours
☐ >2 hours

10. The VR headset was comfortable to put on and wear.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

11. The VRDD experience was enjoyable.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

12. The VRDD experience was generally acceptable to me.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

13. Would you choose VRDD if you had to have an endoscopy procedure in the future?

☐ Yes
☐ No

If you only participated in stage 1, please skip questions 14 to 25 and continue onto questions 26 to 28.

If you participated in stage 2 (wearing the headset during your endoscopy procedure) as well, please complete questions 14 to 28.

Stage 2

14. Time when VR headset was put on again: _____
Time when VR headset was removed: _____

15. Did you encounter any issues with VRDD DURING the endoscopy?
☐ Yes
☐ No

16. Did you encounter any issues with VRDD in the 10 minutes AFTER the endoscopy?
☐ Yes
☐ No

17. If so, what were these issues? (please select as appropriate; you can tick more than one)
☐ Nausea
☐ Dizziness
☐ Claustrophobia
☐ Disorientation
☐ Eye strain and trouble focusing
☐ Not knowing what is happening outside
☐ Uncomfortable to wear
☐ Other, please explain: _____

18. (a) If you experienced nausea during or after endoscopy, please rate its severity.
(1: very mild; 5: very severe)

1 2 3 4 5

(b) When did your symptoms start? Please indicate the time.

_____

(c) How long did this last for?
☐ <5 minutes
☐ 5-30 minutes
☐ 30 minutes-1 hour
☐ 1-2 hours
☐ >2 hours

19. (a) If you experienced dizziness during or after endoscopy, please rate its severity.
(1: very mild; 5: very severe)

1 2 3 4 5

(b) When did your symptoms start? Please indicate the time. _____

(c) How long did this last for?
☐ <5 minutes
☐ 5-30 minutes
☐ 30 minutes-1 hour
☐ 1-2 hours
☐ >2 hours

20. (a) If you experienced disorientation during or after endoscopy, please rate its severity.
(1: very mild; 5: very severe)

1 2 3 4 5

(b) When did your symptoms start? Please indicate the time. _____

(c) How long did this last for?
☐ <5 minutes
☐ 5-30 minutes
☐ 30 minutes-1 hour
☐ 1-2 hours
☐ >2 hours

21. The VRDD was effective as a distraction technique during my procedure.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

22. The VR headset was comfortable to put on and wear during my procedure.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

23. The VRDD experience was enjoyable during my procedure.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

24. The VRDD experience was generally acceptable to me for my procedure.
(1: strongly disagree; 5: strongly agree)

1 2 3 4 5

25. Would you choose VRDD again if you had to have another endoscopy procedure in the future?
☐ Yes
☐ No

26. Do you have any other comments about the VRDD technology or equipment?

27. Would you pay to use VRDD during your procedure?
☐ Yes
☐ No

28. If so, how much would you be willing to pay?
☐ Below $67
☐ $67-107
☐ $107-134
☐ $134-174
☐ Above $174

Thank you for completing these questionnaires. Your responses are much appreciated. Please post them back to the Research & Innovation Department at South Tyneside District Hospital in the CONFIDENTIAL prepaid envelopes that have been provided. Please do this as soon as it is convenient for you so that we can collect and process your responses in a timely manner.

Questionnaire designed by P. S. Lee and S. Panter.