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Exploring the lived experience of endoscopy trainees and their perceptions of nurse endoscopists as trainers

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Abstract

Background: UK endoscopy services face considerable workforce pressures from increasing demand for procedures. To meet this need, health services have introduced the role of nurse endoscopist (also known as clinical, non-medical or non-physician endoscopist). These roles have grown and developed to include performing many complex diagnostic and therapeutic procedures, as well as the provision of endoscopy training.

Aims: This study examines the lived experiences of (nurse and medical) endoscopy trainees, especially as regards being trained by nurse endoscopists. **Methods:** The study employed interpretive phenomenological analysis (IPA). Data were collected through semi-structured in-depth interviews of 10 participants were selected from a sample of trainees attending a basic colonoscopy skills course. Interviews were preceded by observations to gain contextual insights into the training experience. The data were analysed in stages through a process of reading and re-reading the transcripts, making initial descriptive observations and then annotating with discursive, linguistic and conceptual comments.

Findings: Four emerging themes were identified. A lack self-confidence was a barrier to progression, compounded by the emotional impact of making mistakes without comprehensible constructive feedback. Attitudes of trainers and other endoscopy staff, as well as their relationships with trainees, had an impact on self-confidence and educational experience. Pressure on endoscopy units to perform procedures led to a tendency to treat training like a burden, although training was seen as an important investment. Trainees sought to differentiate nurse endoscopist and medical endoscopist roles and justify their skills and value, with comparisons between different nurse and medical trainers.

Conclusion: This article explores the preliminary finding of a larger body of work, however, the emerging themes illustrate the requirement for a collegiate approach to endoscopy training.

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Keywords

- Endoscopy training
- Medical education
- Nurse endoscopist
- Phenomenology
- Qualitative research

CPD reflective questions

- What advantages and disadvantages might nurse endoscopists face as effective trainers?
- How can existing endoscopy training methods be enhanced?
- What is the optimal attitude towards skills-based training?

Introduction

This article explores the present state of research examining the experience of endoscopy trainees and the role of the nurse endoscopist as trainer specifically. The intention of this research is to investigate the lived experience of the trainee undergoing skills-based endoscopy training as a window into the advanced nursing role in endoscopy. These roles are continually evolving, with an emphasis on expanding clinical responsibility and accountability, thus traversing the boundaries of both medical and nursing roles.

Background

Workforce pressures

In the UK, the NHS workforce has had to continually adapt to meet evolving demands for healthcare and government policy. Recent decades have seen the development of advanced nursing roles to meet the existing and projected shortages of qualified staff. The Department of Health and Social Care (DHSC) and Health Education England (HEE) have outlined strategic intentions to commission and expand new health and care roles, ensuring a more flexible workforce that can provide high-quality care. Consequently, a better understanding of the differences between professions is essential for the NHS to continue to meet the needs of the population (DHSC, 1999; 2007a; 2007b; 2008; 2009; 2010a; 2010b; 2014).

With ongoing challenges in healthcare transforming the NHS workforce, nurses have played a pivotal role in advancing knowledge and skills and establishing new services to help meet the demand. Developing nursing roles can involve performing invasive diagnostic or therapeutic procedures, maintaining a caseload of patients and providing outpatient clinic support for a designated patient group.

Endoscopy plays a vital role in the diagnosis and ongoing surveillance of gastrointestinal cancers, including oesophageal, gastric and bowel cancer. Endoscopy is also performed for the diagnosis, surveillance and treatment of a wide range of benign conditions. Endoscopy services across England face a number of challenges, including lack of capacity for increasing demand, with as predicted a 44% increase in procedures by 2020, and more endoscopists needed to be trained to meet the demand. Although COVID-19 has had a significant impact on endoscopy services, the national recovery programme recommends that all services will be back to the level they were pre-COVID-19 (BSG 2020).

Nurse endoscopist roles

A clinical endoscopist is defined as any non-medical clinician who performs endoscopy, including but not limited to nurses, physician assistants and medical assistants (British Society

of Gastroenterology (BSG), 2005). In the UK, the term 'nurse endoscopist' is not legally recognised (BSG, 1994; 2005), where the title of 'clinical endoscopist' was formally adopted in 2017 (HEE, 2017). However, 'nurse endoscopist' continues to be commonly used throughout the UK. In the US, Canada and the EU, the terms 'non-medical endoscopist' or 'non-physician endoscopist' are more commonly used. For this paper, 'nurse endoscopist' will be used.

The nurse endoscopist role is one of many relatively new nursing roles that involve undertaking procedures that were previously considered the remit of the medical profession (Chapman and Cooper, 2009). Nurse endoscopy training and service delivery was first reported in the US in the late 1970s. Several early studies soon confirmed that, with appropriate training and supervision, nurses can adequately perform some diagnostic endoscopic procedures (Schoenfeld et al, 1999; Sprout, 2000; Wright, 2000). In 1994, the BSG (1994) issued guidelines and recommendations suggesting that it would be appropriate for a suitably trained endoscopy nurse, with the full support of the gastroenterologist, to carry out uncomplicated upper and lower GI endoscopy. In more recent years, the role of the nurse endoscopist has evolved, with the development of therapeutic procedures, advanced endoscopy practice and the provision of training.

The literature on the quality and cost-effectiveness of procedures carried out by nurse endoscopists suggests that, while endoscopy performed by a gastroenterologist is the gold standard, procedures performed by a nurse have better scores for quality and patient satisfaction than those performed by a doctor (Maslekar et al, 2009; Williams et al, 2009). William et al (2009) proposed multiple reasons for this, including that nurses tend to be protocol-driven, approach technical skills in a methodical fashion and draw on a professional education that promotes a holistic approach to practice.

Regarding cost-effectiveness, there is a suggestion that nurse endoscopy can, in fact, be more expensive, as additional outpatient appointments are required for a consultant to see the patient post-procedure (Van Putten et al, 2009; Stephens et al, 2015). It has also been argued that nurse endoscopists lack clinical knowledge and so require patients to receive further assessment from a consultant. This would confine the role of the nurse endoscopist to that of a technician who is capable of performing the procedure, with a doctor required to interpret the clinical findings (Norton et al, 2009; van Putten et al, 2009).

Endoscopy training

Historically, endoscopy skills were taught through informal 'apprenticeship'-type training within units. More recently, the process has been formalised with the introduction of mandatory basic skills training and quality measures. The trainee has constant supervision from the trainer and is verbally and physically guided through procedures in a step-by-step process (Mohamed and Raman, 2016; Waschke et al, 2016).

In the UK, gastrointestinal (GI) endoscopy services are overseen by the Joint Advisory Group on gastrointestinal endoscopy (JAG). The JAG provides technical training, professional certification, service accreditation and quality improvement, all according to set clinical standards that offer patients and commissioners a badge of quality. The JAG Endoscopy Training System (JETS) is an accredited national training programme that reflects the JAG's guidelines and quality assurance framework. JETS teaches the cognitive and technical skills

to perform physical actions, such as manoeuvring the endoscope through the GI tract, manipulating it and withdrawing it at the end of the procedure, as well as oesophageal intubation and biopsy (American Society of Gastrointestinal Endoscopists, 2016). JETS also provides an e-portfolio for trainees to record their endoscopic experience and demonstrate their performance and competencies, which will support their JAG certification process (JAG, 2018).

The literature on endoscopy training mainly covers ways of enhancing learning, including feedback, simulation and virtual reality, as well as practical verbal instructions for technical scope manipulation (Dubé and Rostom, 2016; Walsh, 2016). This research is predominantly quantitative and medically focussed (Williams et al, 2006; Ekkelenkamp et al, 2016), and there is little consideration of non-medical disciplines or in-depth exploration of how training is experienced. There is some qualitative research exploring the difference between medical and non-medical endoscopy from a patient-satisfaction perspective (Maslekar et al, 2009).

Aim

There is a gap in the literature for in-depth qualitative research into endoscopy training and/or practice from diverse perspectives (Ataro, 2020). The aim of this research is to examine the experience of interaction during Endoscopy training and to explore the ways in which an individual's professional journey may influence such interaction through the window of the nurse endoscopist.

Ethical approval for the study was gained from Northumbria University ethics committee and the UK Health Research Authority (IRAS 218517).

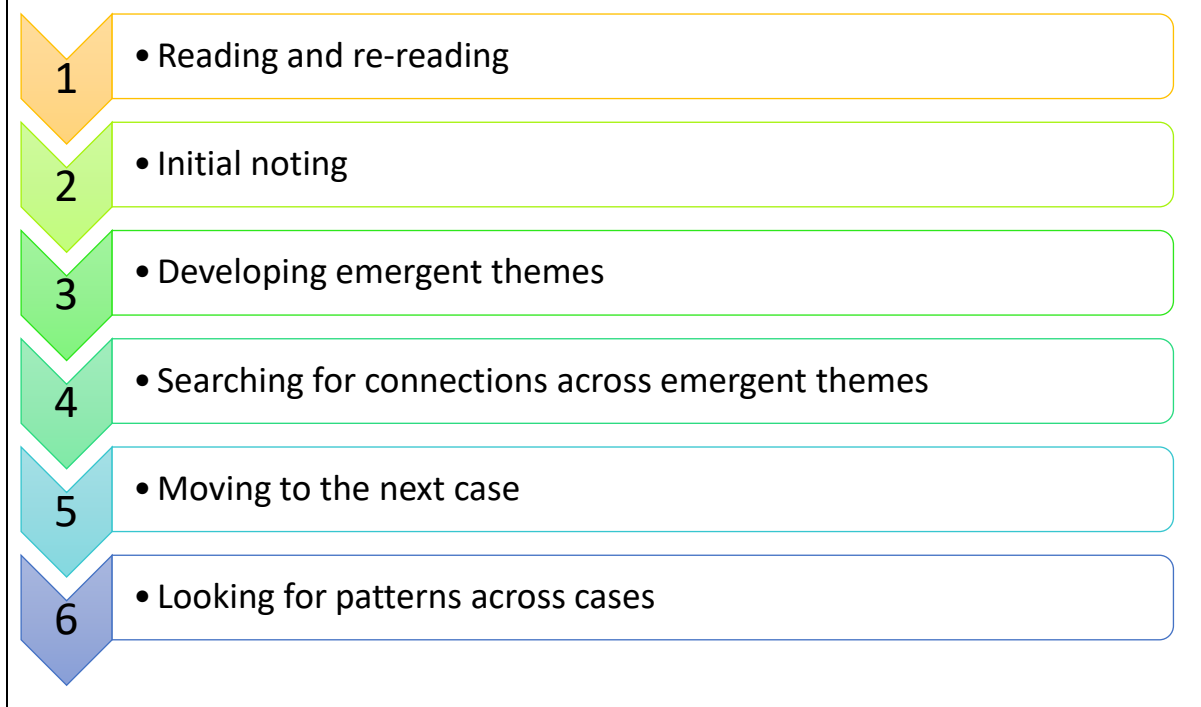
Method

Theory

This study used interpretive phenomenological analysis (IPA), a flexible framework for analysing qualitative data. The primary concern for IPA researchers is to extract rich, detailed, first-person accounts of the experiences under investigation, and the words of participants provide the evidence for the study findings (Pringle et al, 2011). IPA provides rich insights into the experience of participants through a detailed exploration of their narrative accounts (Willig, 2008).

The participants freely describe their experiences and perceptions of a particular event or situation, making sense of it from their own individual worldview. This method emphasises the importance and uniqueness of individual accounts, placing the participant at the centre of the research, while facilitating interpretive engagement with and the development of insights into their experiences. IPA is a cyclical process, with six stages (Figure 1), involving close reading and re-reading of the transcripts, with notes made alongside.

Figure 1. IPA six iterative stages (Smith et al, 2009)



Practice

A sample of 10 participants were purposefully selected from delegates attending two runs of the JAG mandatory basic skills colonoscopy course, held at the Northern Region Endoscopy Training Centre. They were invited by means of an invitation letter, information sheet and consent form. The participants were all trainee endoscopists and included one nurse endoscopist and nine medical trainees, including those undergoing their core training in gastroenterology and colorectal surgery. While it would have been preferable to explore the views of more trainee nurse endoscopists, all the participants had experience of working with a nurse endoscopist or had endoscopy training delivered by a nurse endoscopist.

Interviewing is the exemplary method of data collection for IPA; however, it can be supported by other methods. Therefore, observation of training episodes was undertaken to give a contextual understanding of the process and help build a rapport for subsequent semi-structured interviews. Smith et al (2009) recommended that building a rapport with participants is important in facilitating collection of rich, high-quality data.

Semi-structured interviews allowed the researcher and the participants to engage in dialogue in real time (Pietkiewicz and Smith, 2014). The interview questions focussed on the trainees' experiences of endoscopy training and the events that shaped their personal journey to becoming a competent endoscopist in their own right. They especially related to the nurse endoscopists involved in the training process, including how trainees perceived the role of nurse endoscopist and what influence this perception had on their training.

Interviews, which lasted up to 30 minutes, were audio-recorded and transcribed verbatim by the principal author. The transcripts are then analysed in conjunction with the original recordings and interview themes are identified (Smith et al, 2009). To develop themes, each transcript was annotated with initial comments, then the linguistic, descriptive and conceptual

elements within each interview were looked at more closely. Once this was completed, emerging themes and links between each case were identified.

The principle author, as a nurse endoscopist and trainer, sought to remain aware of their own biases and follow accepted reflexivity processes to bracket these off from the participants' experiences (Goldspink and Engward, 2019). Smith et al (2009) suggested that greater focus on the participant's words increases the likelihood of putting aside the interviewer's preconceptions.

Results

This section outlines the four emerging themes: self-confidence; attitudes and relationships; service pressures; and role differentiation and justification (Box 1). These are illustrated with quotes from the trainees during the interviews below.

Box 1. Emergent themes
Self-confidence <ul style="list-style-type: none">• Lack of confidence as a barrier to progression• Emotional impact of repetition and mistakes• Need for comprehensible constructive feedback
Attitudes and relationships <ul style="list-style-type: none">• Attitudes and relationships between trainees and trainers or other endoscopy staff• Impact on self-confidence and educational experience
Service pressures <ul style="list-style-type: none">• Pressure on endoscopy units to perform procedures• Training as a burden• Importance of training as an investment
Role differentiation and justification <ul style="list-style-type: none">• Differentiation between nurse endoscopist and medical endoscopist roles• Justification of skills and value

Discussion

This section outlines the provisional findings from the emerging themes, it is clear further analysis of the narrative is required at a deeper, more interpretative level. Themes identified were common across most participants interviews and quotes are included to illustrate the trainees' perspective aligned to each theme.

Self-confidence

Learning is an emotional process and endoscopy training can be stressful. Several factors emerged from the initial analysis as influencing the emotional aspect of the trainee's journey and their experiences. The trainee's own self-confidence was a key issue linked to their own perceptions of learning and progress:

‘At the beginning, one of the first and main obstacles stopping me from proceeding and improving was a lack of confidence.’

While the numbers of procedures undertaken may be assumed to increase a trainees confidence, this is not always the case:

‘I have got a 150 colons but my main problem is the looping technique and how to resolve the loops and usually the loops happen in the sigmoid so it is very early on in the test so as a result confidence building doesn’t happen because we have such a difficult set of patients and the training opportunities are very limited’

Making mistakes also had a negative emotional impact which could be further compounded by the reactions of others around the trainee. For example, one trainee indicated how demoralising the reaction of the trainer was when they failed to make progress during a procedure. The emotional impact was further heightened by the trainer also subsequently failing to explain the appropriate technique:

‘When you get the scope taken off you, it is usually a bit difficult. [The trainer] doesn’t always explain what they [the trainer] actually did, and then watch them [the trainer] finish the procedure, and by that time it is a bit too late.’

This seemed to leave the trainee feeling emotionally ‘bruised’, but also highlighted the need for attention to a trainees sense of self-confidence and clear, constructive, timely feedback. Conversely, seeing a trainer have difficulties could enhance the confidence of a trainee by illustrating that issues encountered during procedures were not automatically the trainees fault:

‘I would say they [trainers] always say it’s very difficult and stuff ...and this sounds really bad but I feel better about myself when they struggle to get round, and that makes me feel like I wasn’t doing something completely stupid”

These illustrations begin to highlight the importance of the trainees sense of self-confidence which may impact on, and be bound up with, motivation, self-efficacy and perceived progress.

Relationships and attitudes

Trainees felt that their experience of training was influenced by relationships with the trainers and other staff around them, and the attitudes of those people. Some trainees reported comments from colleagues that suggested a hostile attitude and contributed to a negative experience of training:

‘If we do run late, you very often feel dissatisfaction from the nurses [in the procedure room], just throwing some comments like “We are finishing late again today” or, if we are suctioning things and the suction gets full, “Ah, it’s the end of the day—do you want me to change it?”. It’s comments like this that make the room not a very nice environment to work in, if you do run late for unforeseen circumstances.’

However, supportive attitudes and relationships with trainers contributed to an enhanced sense of confidence and a positive experience:

‘Very good actually—the nurse endoscopist [as trainer]—she was brilliant. She gave me much confidence in my skills, which doesn’t happen with my [medical] trainer. She encouraged me more, and I managed to finish a colonoscopy most of the time.’

‘I notice the nurse endoscopists get on better with the room which makes it a slightly nicer learning environment,.. I mean a lot of the consultants are the same as well, but there is a couple of consultants who are as you can imagine more ‘top down’ so therefore the room become a bit more tense and less easy to train in’

As a consequence, trainees were anxious to maintain these positive relationships with other staff:

‘The last thing you want to do is to upset the nurses [in the procedure room] As a trainee, you are trying to get your training and to get as much out of your trainers as possible. You need the right list; you need to keep nurses happy. It is a very stressful few hours.’

‘I have done 11 colons in a day which is been great, but if you hit one kind of bad one in the morning suddenly the nurses aren’t happy, the HCAs aren’t happy, and then the consultant will just take the scope’

These quotes give a sense of how the wider team impacts on the training experience and how the trainees are aware of trying to maintain good relationships. The influence of these relationships can be to relax the trainee and enhance their confidence, or increase self-doubt and stress.

Service pressures

Training is often considered a negative aspect to service provision and hampers the through put of patients which has a knock-on effect to targets. However, this can be regarded as a short-sighted view, as unless we continue to train we will be unable to invest in the future workforce to meet the needs of the expected future needs of endoscopy services (CRUK 2017). The trainees are mindful of the importance of the relationships linked to service delivery and the minds set of ‘getting the job done’.

‘Service pressures are probably the biggest thing—more than anything, I would say.’

‘It’s weird that the higher-ups want to get the lists done, but they don’t understand that if training actually gets done quicker and more experience, it actually gets lists done.’

Barriers effecting training are generally related to other medical commitments such as on-call, theatres and ward and out-patient commitments, the trainees often find it difficult to negotiate these other commitments to attend their endoscopy training lists. It was frequently identified in the transcripts where the trainees discuss the challenges they feel, in the quotes below the trainees talk about how these issues contribute to the difficulties of training.

“Ward commitments take a lot away even if I am scoping on the unit I am often called away to deal with things on the ward”

“I didn’t have any chance to participate in training, for example in my last job the hospital only had a limited list and while I was in theatre for 6,7,8 or 9 hours you don’t have any chance to start any endoscopy list, it was a very busy hospital with a very long list of very complex operations”

This is further supported in the literature where a large-scale review was conducted to assess the trends in UK endoscopy training on behalf of the British Society of Gastroenterology Trainees’ Section (Biswas, Alrubaiy, China, Locket, Ellis Hawkes 2019). It demonstrated that 74% of junior trainees were committed to attend general internal medicine related activities (for example ward work) for at least a third of their week which significantly impacted on their availability to access endoscopy list.

Role differentiation and justification

Trainees had a strong sense that they need to differentiate their role from other roles. There was differentiation between the skills and knowledge of the trainee and the trainer, as well as between the relative merits of medical endoscopists and nurse endoscopists as trainers. This could be linked to a need to place and reinforce boundaries around professional identity:

‘There is a bit of a difference with the nurse endoscopist. I did find a bit of a difference, especially in the planning management, and I find I am more comfortable with the gastro consultant.’

This differentiation was linked to a sense among trainees that they needed to justify their role. This often involved justifying their technical, clinical-management and/or decision-making skills, frequently in relation to those of their trainer or other endoscopy professionals:

‘Nurse endoscopists are a lot more concerned about patients and the nurses in the room, probably because they have been on that side, and they are much more interactive with patients, and, in my opinion, doctors or consultants are much more focused on the procedure itself or getting things done.’

Notwithstanding the differentiation and justification many of the trainees expressed a positive experience as the nurse endoscopists as trainer;

‘I must say I have probably learnt more from the nurse endoscopist rather than I did from some of the more experienced consultants’

‘The nurse endoscopist who taught me OGD she was excellent and she was very measured and very easy’

The role of the Nurse endoscopist as trainer is very valuable and from the participants responses has had a positive effect on the training experience, although the perceived need to ‘differentiate’ which may be linked to professional identity remains.

Limitations

This paper is part of a larger body of work, and further analysis of the narrative is required at a deeper, more interpretative level (Smith et al, 2009). requires further analysis. With IPA, there are different levels of interpretation with the intention for the researcher to 'dig deeper'. As a novice researcher, it is common to be tentative and descriptive with the analysis. However, the data requires more interpretation to unpick the trainee's attitudes, assumptions and beliefs around NE as trainers. From this point, it is hoped that further detailed and interpretive analysis will provide a deeper insight into the narrative of each trainee and their own experience.

Conclusion

While this article explores the preliminary findings of a larger body of work there are some clear messages which can be taken away. Endoscopy training is a very stressful process for the trainee and external factors play a significant part to that experience. Attending the to 'emotional safety' of the trainee in the learning context is not to be overlooked (Allan et al, 2020, Steven et al, 2014). It is important for all involved to reflect upon and consider the emotional aspects of learning, the relationships and attitudes of the team members and to try to make the learning environment as considerate and constructive as possible. Trainees are also very aware of the service demands which exist, and the occasional perception that training is a burden and impacts on service provision. However when seen from a wider perspective training is key to increasing skilled staff to enable greater service delivery. The need to justify and differentiate skills and roles expressed by the trainees may be viewed both as part of professional identify formation and 'boundary work' between the professions. However the emerging findings from this study seem to suggest that both medical and nursing endoscopists have a place and bring complimentary strengths to the trainees experience.

It is hoped this article has explored some of those aspects and it illustrates that endoscopy as a service and even more so as a training environment is truly interprofessional and its success comes from the commitment and support of the whole team.

References

- Allan H., Magnusson C., Steven A (2020) Learning to keep patients safe - emotional safety for learning and complexity in the nursing workforce. In Routledge International Handbook of Nurse Education (1st edition). Routledge. ISBN 9780815358862
- American Society for Gastrointestinal Endoscopy. Principles of training in GI endoscopy. 2009. <https://doi.org/10.1016/j.gie.2011.09.008> (accessed 14 September 2021)
- Ataro G. Methods, methodological challenges and lesson learned from phenomenological study about OSCE experience: overview of paradigm-driven qualitative approach in medical education. Ann Med Surg (Lond). 2020; 49:19–23. <https://doi.org/10.1016/j.amsu.2019.11.013>

- Biswas S, Alrubaiy L, China L on behalf of the British Society of Gastroenterology Trainees' Section, et al Trends in UK endoscopy training in the BSG trainees' national survey and strategic planning for the future *Frontline Gastroenterology* 2018;9:200-207.
- British Society of Gastroenterology (2020) Multi-society guidance on further recovery of endoscopy services during the post-pandemic phase of COVID-19. <https://www.bsg.org.uk/covid-19-advice/>
- British Society of Gastroenterology. The nurse endoscopist. 1995. www.bsg.org.uk/pdf_word_docs/nursendoscopist.pdf (accessed 14 September 2021)
- British Society of Gastroenterology. Non-medical endoscopists: a report of the working party of the British Society of Gastroenterology. 2005. www.bsg.org.uk/wp-content/uploads/2019/12/Non-Medical-Endoscopists.pdf (accessed 14 September 2021)
- Cancer Research UK. Scoping the future: an evaluation of evaluation of evaluation of endoscopy capacity across the capacity across the across the NHS in England. 2015. www.cancerresearchuk.org/sites/default/files/scoping_the_future_-_final.pdf (accessed 14 September 2021)
- Chapman W, Cooper B. Exploring the nurse endoscopist role: a qualitative approach. 2013. <https://doi.org/10.12968/bjon.2009.18.22.45565> (accessed 14 September 2021)
- Cooper MA, McDowell J, Raesid L. The similarities and differences between advanced nurse practitioners and clinical nurse specialists. 2019. <https://doi.org/10.12968/bjon.2019.28.20.1308> (accessed 14 September 2021)
- Department of Health and Social Care. Making a difference. 1999. <https://doi.org/10.12968/bjcn.1999.4.9.7444> (accessed 14 September 2021)
- Department of Health and Social Care. Health and social care policy and the interprofessional agenda: the first supplement to creating an interprofessional workforce. 2007a. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_078594 (accessed 14 September 2021)
- Department of Health and Social Care. Creating an interprofessional workforce: an education and training framework for health and social care in England. 2007b. www.caipw.org/download/department-health-2007-creating-interprofessional-workforce-education-training-framework-health-social-care-england-cipw/ (accessed 14 September 2021)
- Department of Health and Social Care. Nursing careers framework. 2009. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228879/7593.pdf (accessed 14 September 2021)
- Department of Health and Social Care. Equity and excellence: liberating the NHS. 2010a. www.gov.uk/government/publications/liberating-the-nhs-white-paper (accessed 14 September 2021)
- Department of Health and Social Care. Advanced level nursing: a position statement. 2010b. www.gov.uk/government/publications/advanced-level-nursing-a-position-statement (accessed 14 September 2021)
- Department of Health and Social Care. Five year forward view. 2014. www.england.nhs.uk/five-year-forward-view/ (accessed 14 September 2021)
- Dubé C, Rostom A. Acquiring and maintaining competency in gastrointestinal endoscopy. *Best Pract Res Clin Gastroenterol.* 2016; 30(3):339–347. <https://doi.org/10.1016/j.bpg.2016.05.004>

- Ekkelenkamp VE, Koch AD, de Man RA, Kuipers EJ. Training and competence assessment in GI endoscopy: a systematic review. *Gut*. 2016; 65(4):607–615. <https://doi.org/10.1136/gutjnl-2014-307173>
- Fonseca AL, Reddy V, Yoo PS, Gusberg RJ, Longo WE. Senior surgical resident confidence in performing flexible endoscopy: what can we do differently? *J Surg Ed*. 2016; 73(2):311–316. <https://doi.org/10.1016/j.jsurg.2015.09.014>
- Forbes N, Mohamed R, Raman M. (2016) Learning curve for endoscopy training: Is it all about numbers? *Best Practice & Research Clinical Gastroenterology*, Volume 30, Issue 3, 2016, Pages 349-356, ISSN 1521-6918, <https://doi.org/10.1016/j.bpg.2016.04.003>.
- Goldspink S, Engward H. Booming clangs and whispering ghosts: attending to the reflexive echoes in IPA research. *Qual Res Psychol*. 2019; 16(2):291–304. <https://doi.org/10.1080/14780887.2018.1543111>
- Health Education England. Accelerated non-medical endoscopist training programme year 1 evaluation report to Health Education England. 2017. www.thejag.org.uk
- Maslekar S, Hughes M, Gardiner A, Monson G, Duthie S. Patient satisfaction with lower gastrointestinal endoscopy: doctors, nurse and nonmedical endoscopists. 2009. <https://doi.org/10.1111/j.1463-1318.2009.01989.x>
- Norton C, Grieve A, Vance M. Nurse delivered endoscopy. *BMJ*. 2009; 338(1):a3049. <https://doi.org/10.1136/bmj.a3049>
- Pringle J, Drummond J, McLafferty E, Hendry C. Interpretative phenomenological analysis: a discussion and critique. *Nurse Res*. 2011; 18(3):20–24. <https://doi.org/10.7748/nr2011.04.18.3.20.c8459>
- Schoenfeld P, Lipscomb S, Crook J, Dominguez J, Butler J, Holmes L, Cruess D, Rex D. Accuracy of polyp detection by gastroenterologists and nurse endoscopists during flexible sigmoidoscopy: a randomized trial. *Gastroenterology*, 1999; 117(2):312–318. <https://doi.org/10.1053/gast.1999.0029900312>
- Scottish Government. Modernising nursing careers: setting the direction. 2006. www.gov.scot/publications/modernising-nursing-careers-setting-direction/ (accessed 14 September 2021)
- Smith JA, Flowers P, Larkin M. Interpretative phenomenological analysis: theory, method and research. London: Sage; 2009
- Sprout J. Nurse endoscopist training: the next step. *Gastroenterology Nursing*. 2000; 23(3):111–115
- Stephens M, Hourigan LF, Appleyard M et al. Non-physician endoscopists: a systematic review. *World J Gastroenterol*. 2015; 21(16):5056–5071. <https://doi.org/10.3748/wjg.v21.i16.5056>
- Steven, A., Magnusson, C., Smith, P. and Pearson P.H. (2014) Patient safety in nursing education: Contexts, tensions and feeling safe to learn. *Nurse Education Today* 34(2), 277-284 <http://dx.doi.org/10.1016/j.nedt.2013.04.025>
- van Putten PG, van Leerdam ME, Kuipers EJ. The views of gastroenterologists about the role of nurse endoscopists, especially in colorectal cancer screening. 2009. <https://doi.org/10.1111/j.1365-2036.2009.03936>
- Walsh CM. In-training gastrointestinal endoscopy competency assessment tools: types of tools, validation and impact. *Best Pract Res Clin Gastroenterol*. 2016; 30(3):357–374. <https://doi.org/10.1016/j.bpg.2016.04.001>

- Waschke KA, Anderson J, Macintosh D, Valori RM. Training the gastrointestinal endoscopy trainer. *Best Pract Res Clin Gastroenterol*. 2016; 30(3):409–419. <https://doi.org/10.1016/j.bpg.2016.05.001>
- Williams J, Russell I, Durai D, Cheung W, Farrin A, Bloor K, Coulton S, Richardson G. What are the clinical outcome and cost-effectiveness of endoscopy undertaken by nurses when compared with doctors? A multi-institution nurse endoscopy trial (MINuET). *Health Technol Assess*. 2006; 10(40):1–195. <https://doi.org/10.3310/hta10400>
- Willig C. *Introducing qualitative methods in psychology*. Buckingham: Open University Press; 2008
- Wright KB. A description of the gastroenterology nurse endoscopist role in the United States. *Gastroenterology Nursing*. 2000; 23(2):78–82