Endoscopy nurses need sound theoretical knowledge and solid practical skills but, once they have acquired basic competencies, training in endoscopy nursing is limited, despite the fact that modern-day endoscopy often involves complex therapeutic procedures. East Yorkshire School of Endoscopy offers a one-day endoscopy nurse training course that uses a blend of theory and simulation to enhance participants’ understanding and practice of the technical procedures undertaken in endoscopy. Originally designed for nurses, it is now also being offered to healthcare assistants. This article summarises the aims, contents, methods and benefits of the course.

Using simulation in hands-on training for endoscopy nurses

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Key points

Endoscopy training and standards have significantly improved over the last decade

Training for endoscopists is well established, but training for endoscopy nurses less so

Endoscopy nurses need sound knowledge of therapeutic procedures and solid hands-on training

Simulation training using porcine models is a safe way of practising endoscopy skills

East Yorkshire School of Endoscopy provides a one-day endoscopy training course for nursing staff that blends theory and simulation

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Abstract Once nurses working in the endoscopy department have acquired basic competencies, training in endoscopy nursing is limited, despite the fact that modern-day endoscopy often involves complex therapeutic procedures. East Yorkshire School of Endoscopy offers a one-day endoscopy nurse training course that uses a blend of theory and simulation to enhance participants’ understanding and practice of the technical procedures undertaken in endoscopy. Originally designed for nurses, it is now also being offered to healthcare assistants. This article summarises the aims, contents, methods and benefits of the course.


Endoscopy nurses need sound theoretical knowledge and solid practical skills but, once they have acquired basic competencies in endoscopy, there is little further training. In 2013, East Yorkshire School of Endoscopy (EYSE) designed a course to help them enhance their practice and improve their understanding of the more technical aspects of modern-day endoscopy. Since 2015, the course has also been offered to healthcare assistants (HCAs) working in the endoscopy department. This article describes why such a course was needed, its contents, the methods it uses and how it can benefit those who undertake it.

A challenging specialty

Endoscopy is a challenging specialty involving a variety of diagnostic and therapeutic techniques. Patients often require emergency procedures out of hours, so endoscopy departments usually have an on-call service. Endoscopists are usually supported by nurses and HCAs whose main tasks are to:

- Prepare and operate equipment and accessories;
- Support and manage sedated and unsedated patients before, during and after the procedure;
- Handle samples.

While endoscopists perform the procedures, nurses and HCAs need a wide range of hands-on skills to be able to assist them. Nurses are mainly responsible for patient management and HCAs for technical support. However, nurses also manage on-call services, so they need to be knowledgeable in the technical aspects of endoscopy.

Modern-day endoscopy involves complex therapeutic procedures – such as polypectomy and variceal banding – that are technically challenging and have higher complication rates than diagnostic procedures. The risk of complications is higher when less-experienced practitioners are involved, whether they are nursing staff or endoscopists.

In this article...

- Training needs of nurses working in the endoscopy department
- Benefits of realistic simulation training in endoscopy using porcine models
- Training course in endoscopy nursing using a blended approach of theory and practice
Endoscopy training
Training and standards of practice for endoscopists have greatly improved in the last decade. This is largely due to the Joint Advisory Group on Gastrointestinal Endoscopy (JAG) (www.thejag.org.uk), an accreditation scheme for UK endoscopy services established in 2005 and hosted by the Royal College of Physicians. The JAG’s accreditation process is underpinned by the Global Rating Scale, a web-based self-assessment quality improvement tool.

For endoscopy nurses, however, training is not as well established as for endoscopists. The Gastrointestinal Endoscopy for Nurses Programme (www.jets.nhs.uk/GIN), run by the JAG, offers a structured approach for the training, assessment and appraisal of nurses, thus providing a competency-based set of learning outcomes. However, the competencies are not mandatory requirements and, once they have been achieved, there is no further structured training available. So, while there is a clear approach to the training of nurses starting in endoscopy, possibilities of further training and continuous professional development for experienced nurses is lacking.

In recent years, techniques have improved and practice has changed so endoscopy increasingly plays a therapeutic role. There is still little in the way of practical training for experienced endoscopy nurses, who are often expected to develop their skills through a ‘see one, do one’ approach. This is not appropriate for health professionals who need to be able to perform complex therapeutic procedures (Ekkelenkamp et al, 2016).

Training methods
When designing a training course, attention must be paid to the training method. Intensive training courses can improve trainees’ knowledge and technical skills (Thomas-Gibson et al, 2007), but they have not been shown to change attitudes or behaviours. Simulation provides a good way of practising clinical skills in a safe environment (Matharoo et al, 2014) and has been used to teach basic endoscopy skills for several years (Ray and Hills, 2012).

“Modern-day endoscopy involves complex therapeutic procedures that are technically challenging”

Another challenge for trainers is that they usually have limited time to impart a large amount of information to, and ensure it is understood and retained by, trainees (Samarakoon et al, 2013). Furthermore, not everyone absorbs, comprehends and retains information in the same way or at the same speed (Hallin, 2014). Nursing encompasses people from different backgrounds with different educational experiences, learning styles, levels of competence and preparedness to study. Adapting teaching methods is key and VARK, a method introduced by Neil Fleming in 2006 (www.vark-learn.com), allows trainers to do just that (Box 1).

Box 1. VARK and how we used it for our course
VARK stands for visual (V), aural (A), read/write (R) and kinaesthetic (K). It classifies learners into four modalities:
- Visual (V) learners prefer looking at images (graphs, flow charts, videos). The course accommodates their preferences by using videos to explain pathologies and show complex procedures.
- Aural (A) learners prefer to listen to a presentation and make their own notes; they tend to remember what they have learnt by reading out loud. To support this type of learner, our course gives them paper and there are case discussions in which trainees are encouraged to verbally explain the correct ways of managing patients.
- Read/write (R) learners prefer printed materials such as handouts and textbooks. Course handouts are provided as well as information on where to find further written resources.
- Kinaesthetic (K) learners prefer hands-on elements such as simulations and real-life experiences. These learners are catered for in the practical sessions.

Designing a nurse training day
Since 1995, EYSE has been training junior doctors, consultants and non-medical endoscopists in advanced therapeutic techniques, using porcine models for hands-on simulation. In 2013, acknowledging the training needs of nurses working in the endoscopy department, EYSE designed a course to equip them with adequate knowledge, skills and confidence.

The course consists of nine hours of face-to-face learning delivered by three trainers – a consultant gastroenterologist, a nurse practitioner and an endoscopy sister. As time for training is sparse, the course is scheduled to last one day only. A theoretical part divided into three sections (nursing management, upper and lower gastrointestinal therapeutics – Box 2) is followed by practical hands-on sessions that reinforce learning.

The theory is delivered using presentations, case studies, videos, photos and diagrams. For the practical training, we have two workstations where trainees can put theory into practice in a controlled and safe environment. We use a porcine model – a real pig colon and pig stomach with pathology placed inside a human plastic torso – to replicate a real-life situation and demonstrate hands-on techniques.

Trainees have the opportunity to handle an endoscope as if they were an endoscopist. This gives them insight into how difficult it is to perform an endoscopy and helps them understand the challenges faced by endoscopists. This is especially useful for trainees and junior members of staff.

Rationale and benefits
We designed the course so it provides a foundation of theoretical knowledge enhanced by hands-on practice in a safe environment. This approach helps trainees...

The theoretical part of the training is followed by practical sessions to reinforce learning...
Innovation

Box 2. Topics covered

Nursing management
- Patient assessment
- Consent
- Sedation pharmacology
- Sedation-related complications
- Patient monitoring
- Patient recovery and discharge

Upper gastrointestinal therapeutics
- Non-variceal bleeding
- Variceal bleeding
- Injection of adrenaline
- Argon plasma coagulation (APC) application
- Heater probe application
- Endoscopic band ligation
- Sclerotherapy
- Tissue adhesive application
- Application of clips
- Percutaneous endoscopic gastrostomy (PEG)
- Management of strictures and dilatation

Lower gastrointestinal therapeutics
- Polypectomy
- Endoscopic mucosal resection (EMR)

retain much more than if they just listened to a presentation, read a manual or watched a demonstration. It enables them to take the learning straight into the workplace.

Understanding all aspects of diagnostic and therapeutic endoscopy, along with patient management, is essential for safe, effective practice. It is as important for endoscopy nurses to be fully trained as it is for endoscopists – even more so if the endoscopist is a trainee or junior member of staff. One of our aims is to help endoscopy nurses understand the theory behind each procedure so they know why, and how, those procedures are conducted.

Hands-on training is essential for patient safety. Our course allows trainees to work on porcine models that are realistic while allowing for mistakes. This ensures learning occurs in a relaxed environment, as opposed to a pressured real-world setting in which patients are potentially at risk. During the practical sessions, trainees receive personal attention and need to make on-the-spot decisions, which hopefully enhances their confidence.

The course was designed with the VARK method in mind. It encompasses different aspects of learning – visual, practical and theoretical – thereby meeting the needs of all trainees, no matter what type of learner they are. The training course is also a forum for discussion between nurses; this allows for reflection that can be used as part of the revalidation process.

Participants and feedback

In November 2013, eight endoscopy nurses from Hull and East Yorkshire Hospitals Trust with varying levels of experience (some having newly joined endoscopy and others having 20 years’ practice or more) trialled the training course. Between 2013 and 2018 a total of 78 trainees attended.

After each course we elicited feedback from participants. Box 3 features some of their comments, which reflect the positive evaluations, despite the fact that one day of training is seen as insufficient and the need of “a wider plan of training progression” is expressed.

We also asked participants to rate, on a scale of 1 to 4 (4 being ‘strongly agree’ and 1 being ‘strongly disagree’), to what extent they agreed with the following statements:

- “The course has improved my confidence in the endoscopy environment”;
- “Knowledge I have gained from the course has improved my current practice in endoscopy”;
- “The course has helped with communication and understanding of the endoscopist’s role”;
- “The course has given me the courage to challenge practice”.

Twenty-four participants replied to this survey. All agreed with statements 1 and 2, with an overwhelming majority ‘strongly agreeing’. For statements 3 and 4, the results were slightly more nuanced: the vast majority still agreed or strongly agreed with them, but one participant neither agreed nor disagreed with statement 3, one neither agreed nor disagreed with statement 4. Interestingly, one participant commented that: “challenging practice is only possible in a place where there is no fear of reprisal”.

Conclusion

The course, which is accredited by the Royal College of Nursing, was originally designed for nurses, but since 2015 we have also offered it to HCAs – we think they can also benefit from it and that patient safety and care quality will improve as a consequence. Currently, both nurses and HCAs working in endoscopy departments at Hull and East Yorkshire Hospitals Trust have undergone the training. We are now offering the course nationally to all nurses and HCAs working in endoscopy, including those in the private sector. We believe our chosen method of training can help trusts respond to the high demand for skilled and confident endoscopy nursing staff.

References


For more on this topic online

- Managing upper gastrointestinal acute bleeding
  Bit.ly/NTGIbleeding