CHAPTER 1

The Endoscopy Unit, Staff, and Management

Most endoscopists, and especially beginners, focus on the individual procedures and have little appreciation of the extensive infrastructure that is now necessary for efficient and safe activity. From humble beginnings in adapted single rooms, most of us are lucky enough now to work in large units with multiple procedure rooms full of complex electronic equipment, with additional space dedicated to preparation, recovery, and reporting.

Endoscopy is a team activity, requiring the collaborative talents of many people with different backgrounds and training. It is difficult to overstater the importance of appropriate facilities and adequate professional support staff, to maintain patient comfort and safety, and to optimize clinical outcomes.

Endoscopy procedures can be performed almost anywhere when necessary (e.g. in an intensive care unit), but the vast majority take place in purpose-designed “endoscopy units.”

Endoscopy units

Details of endoscopy unit design are beyond the scope of this book, but certain principles should be stated.

There are two types of unit. Private clinics (called ambulatory surgical centers in the USA) deal mainly with healthy (or relatively healthy) outpatients, and should resemble cheerful modern dental suites. Hospital units have to provide a safe environment for managing sick inpatients, and also more complex procedures with a therapeutic focus, such as endoscopic retrograde cholangiopancreatography (ERCP). The more sophisticated units resemble operating suites. Units that serve both functions should be designed to separate the patient flows as far as possible.

The modern unit has areas designed for many different functions. Like a hotel or an airport (or a Victorian household), the endoscopy unit should have a smart public face (“upstairs”), and a more functional back hall (“downstairs”). From the patient’s perspective, the suite consists of areas devoted to reception, preparation, procedure, recovery, and discharge. Supporting these activities are many other “back hall” functions, which include scheduling, cleaning, preparation, maintenance and storage of equipment, reporting and archiving, and staff management.
Procedure rooms
The rooms used for endoscopy procedures should:

- **not be cluttered or intimidating.** Most patients are not sedated when they enter, so it is better for the room to resemble a modern dental office, or kitchen, rather than an operating room.
- **be large enough** to allow a patient stretcher/trolley to be rotated on its axis, and to accommodate all of the equipment and staff (and any emergency team), but also compact enough for efficient function.
- **be laid out with function in mind,** keeping nursing and doctor spheres of activity separate (Fig 1.1), and minimizing exposed trailing electrical cables and pipes (best by ceiling-mounted beams).

  Each room should have:
  - **piped oxygen and suction** (two lines);
  - **lighting planned** to illuminate nursing activities but not dazzle the patient or endoscopist;
  - **video monitors placed conveniently** for the endoscopist and assistants, but also allowing the patient to view, if wished;
  - **adequate counter space** for accessories, with a large sink or receptacle for dirty equipment;
  - **storage space for equipment required on a daily basis**;
  - **systems of communication** with the charge nurse desk, and emergency call;
  - **disposal systems** for hazardous materials.

Patient preparation and recovery areas
Patients need a private place for initial preparation (undressing, safety checks, intravenous (IV) access), and a similar place in which to recover from any sedation or anesthesia. In some units these functions are separate, but can be combined to maximize flexibility. Many units have simple curtained bays, but rooms with solid side
walls and a movable front curtain are preferable. They should be large enough to accommodate at least two people other than the patient on the stretcher, and all of the necessary monitoring equipment.

The “prep-recovery bays” should be adjacent to a central nursing workstation. Like the bridge of a ship, it is where the nurse captain of the day controls and steers the whole operation, and from which recovering patients can be monitored.

All units should have at least one completely private room for sensitive interviews/consultations before and after procedures.

**Equipment management and storage**
There must be designated areas for endoscope and accessory reprocessing, and storage of medications and all equipment, including an emergency resuscitation cart. Many units also have fully equipped mobile carts to travel to other sites when needed.

**Staff**
Specially trained endoscopy assistants have many important functions. They:

- prepare patients for their procedures, physically and mentally;
- set up all necessary equipment;
- assist endoscopists during procedures;
- monitor patients’ safety, sedation, and recovery;
- clean, disinfect, and process equipment;
- maintain quality control.

Most endoscopy assistants are trained nurses, but technicians and nursing aides also have roles (e.g., in equipment processing). Large units need a variety of other staff, to handle reception, transport, reporting, and equipment management, including informatics.

Members of staff need places to store their clothes and valuables, and a break area for refreshments and meals.

**Procedure reports**
Usually, two reports are generated for each procedure—one by the nurses and one by the endoscopist.

**Nurse’s report**
The nurse’s report usually takes the form of a preprinted “flow sheet,” with places to record all of the pre-procedure safety checks, vital signs, use of sedation/analgesia and other medications, monitoring of vital signs and patient responses, equipment and accessory usage, and image documentation. It concludes with a copy of the discharge instructions given to the patient.

**Endoscopist’s report**
In many units, the endoscopist’s report is written or dictated in the procedure rooms. In larger ones, there may need to be a separate area designed for that purpose.
The endoscopist’s report includes the patient’s demographics, reasons for the procedure (indications), specific medical risks and precautions, sedation/analgesia, findings, diagnostic specimens, treatments, conclusions, follow-up plans, and any unplanned events (complications). Endoscopists use many reporting methods—handwritten notes, preprinted forms, free dictation, and computer databases.

**The paperless endoscopy unit**

Eventually all of the documentation (nursing, administrative, and endoscopic) will be incorporated into a comprehensive electronic management system. Such a system will substantially reduce the paperwork burden, and increase both efficiency and quality control.

**Management, behavior, and teamwork**

Complex organizations require efficient management and leadership. This works best as a collaborative exercise between the medical director of endoscopy and the chief nurse or endoscopy nurse manager. The biggest units will also have a separate administrator. These individuals must be skilled in handling people (doctors, staff, and patients), complex equipment, and significant financial resources. They must develop and maintain good working relationships with many departments within the hospital (such as radiology, pathology, sterile processing, anesthesia, bioengineering), as well as numerous manufacturers and vendors. They also need to be fully cognizant of all of the many local and national regulations that now impact on endoscopy practice.

The wise endoscopist will embrace the team approach, and realize that maintaining an atmosphere of collegiality and mutual respect is essential for efficiency, job satisfaction, and staff retention, and for optimal patient outcomes.

It is also essential to ensure that the push for efficiency does not drive out humanity. Patients should not be packaged as mere commodities during the endoscopy process. Treating our customers (and those who accompany them) with respect and courtesy is fundamental. Always assume that patients are listening, even if apparently sedated, so never chatter about irrelevances in their presence. Never eat or drink in patient areas. Background music is appreciated by many patients and staff.

**Documentation and quality improvement**

The agreed policies of the unit (including regulations dictated by the hospital and national organizations) are enshrined in an *Endoscopy Unit Procedure Manual*. This must be easily available, constantly updated, and frequently consulted.

Day-to-day documentation includes details of staff and room usage, disinfection processes, medications, instrument and accessory use and problems, as well as the procedure reports.
A formal quality assessment and improvement process is essential for maximizing the safety and efficiency of endoscopy services. Professional societies have recommended methods and metrics. The American Society for Gastrointestinal Endoscopy (ASGE) has incorporated these into its Endoscopy Unit Recognition Program, and the benefit of concentrating on and documenting quality is well exemplified by the success of the Global Rating Scale project in the UK.

Educational resources

Endoscopy units should offer educational resources for all of its users, including patients, staff, and doctors. Clinical staff need a selection of relevant books, atlases, key reprints, and journals, and publications of professional societies. Increasingly, many of these materials are available online, so that easy Internet access should be available. Many organizations produce useful educational videotapes, CD-ROMs, and DVDs.

Teaching units will need to embrace computer simulators, which are becoming valuable tools for training (and credentialing).

Further reading


Global Rating Scale. (available online at www.globalratingscale.com).


Chapter video clip

Video 1.1 The endoscopy unit: a virtual tour

Now check your understanding—go to

www.wiley.com/go/cottonwilliams/practicalgastroenterology