Delivering endoscopy services to meet the demands of today and the challenges of tomorrow

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Over the last 20 years, a concerted effort by staff across the health service and the wider medical community has produced improvements in endoscopy service quality, productivity, and patient experience. Services are however still encountering some challenges in planning for and meeting increased demand in a difficult period for the National Health Service; recent waiting times released by NHS England illustrate that demand for endoscopy diagnostic services is outstripping capacity\(^1\), with no decrease in requirements anticipated in the foreseeable future.

What are the stress factors on the system?

One of the major influences on the provision of top quality, effective endoscopy services is the widely-acknowledged shift in patient demographics; not only are there more of us, but we are living longer. With cancer prevalence at its peak in the 85-89 years age group\(^2\), increasing age is widely accepted as the main risk factor for cancer. This has led to an increase in diagnostic requirements to identify and treat pre-cancerous polyps as part of the bowel cancer screening programme, offered to patients in England aged 55; colorectal cancer in particular is a major challenge as both one of the most lethal malignancies and one that is estimated to have a total economic cost to the UK in excess of £1.5bn\(^3\) as of 2009.

Internal pressures are also placing a burden on NHS resources; recruitment and workforce concerns are particularly challenging issues. Despite the drive to recruit non-medical endoscopists, staff capacity is strained by the demands on the system; a report by the Centre for Workforce Intelligence estimated that nurse endoscopists already undertake as much as 20% of the workload in an endoscopy unit. With nurses making up only 8% of the total number of endoscopists active at the time of the report, and with recruit numbers widely reported to be falling, the possibility of increasing this uptake seems unlikely to be achievable in the current climate.

One of the overriding challenges facing the NHS as a whole is the current financial climate. While it is possible for hospitals to provide endoscopy services at tariff and not make a loss, the cost, maintenance, and replacement cycles for the equipment required are significant. In addition, a decontamination and reprocessing facility is required that also has a short replacement cycle.

Many of the endoscopy facilities within the NHS today are nearing a point of requiring refurbishment, whether partial or complete; in a large hospital, this process can last for more than six months and cost upwards of £1 million. As endoscopy decontamination suites age and the risk of reduced efficiency increases, the effect on scope life and corresponding equipment replacement costs builds. Finding capital funding to invest in refurbishment, which requires a reduction in or a

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suspension of patient throughput, is also increasingly challenging. There are further financial complexities around the provision of the clinical aspects of the service too; the cost effectiveness of staffing and procedure type must be weighed against the advantages of maintaining patient flow and the availability of endoscopists to provide necessary service levels.

How could the service develop in coming years?

Diagnostic

Like many other medical fields, endoscopy has seen and continues to see rapid advances in the technology integral to effective service delivery. Much of this development focuses on improved diagnostic capability, a key factor in improving patient outcomes. The National Cancer Registration and Analysis Service, part of Public Health England, states,

“Early diagnosis of bowel cancer is vital to improve outcomes. Over 90% of patients diagnosed with the earliest stage of disease survived five years from diagnosis, compared to only 6.6% of those diagnosed with advanced disease which has spread to other parts of the body.”

With a recent report estimating that each missed outpatient appointment costs the NHS £120, and with issues like non-attendance or non-adherence to preparation protocols causing additional

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resource burdens, improving patient experience in the endoscopy field could help to reduce costs and improve patient flow. Advances in diagnostic technology range from ever-improving image quality to newer techniques like capsule endoscopy and CT colonography, which can be preferred by patients due to their non-invasive natures.

**Therapeutic**

Advances in therapeutic techniques are also changing the landscape of the speciality; some procedures that have previously been considered the remit of surgeons can now be performed by physicians using flexible endoscope technology. The advent of developments such as the per-oral endoscopic myotomy (POEM) technique, which leaves no external scarring, and equipment that allows for resectioning and therapeutic intervention during an endoscopy procedure, including hydrosurgical instruments or instrument sets for the removal of lesions/tumours during colorectal endoscopy, mean that the horizons of flexible endoscopy are widening rapidly. This increased capability is likely to continue to expand. These minimally-invasive procedures are likely to be more efficient and cost-effective than conventional surgery, and patient choice may also be in favour of this type of procedure, leading to further demand.

**Service delivery**

With the well-publicised pressures on acute hospitals, which are becoming increasingly busy as the population and its needs expand, an alternative setting for bowel screening and endoscopy service provision is likely to be considered with growing frequency. These services are already delivered in a community setting in some parts of the country, but it is likely that this will become more commonplace as permanent capacity is unable to flex to meet rising demand. This brings with it new challenges, such as finding an appropriate clinical setting for procedures, ensuring there is an adequate workforce in place to facilitate efficient patient flow, and how to maintain the necessary decontamination and equipment maintenance programmes. With capital investment funds severely limited for most NHS Trusts, the construction of new facilities to serve the community is highly unlikely. When capital becomes available, Trust leaders are in the position of having to select a very small number of development projects to fund and providing local endoscopy services to what are often smaller population bases requires adequate justification.

**Clinical standards**

Accreditation standards will also continue to evolve in the coming years. While these are intended to drive better practice and improve patient outcomes through optimal clinical performance, they can also mean investment in new training for staff, updated equipment and new methodologies. The Joint Advisory Group on GI Endoscopy (JAG) is one of the most significant initiatives in recent years, driving up standards within endoscopy and supporting services in delivering better person-centred care. Current JAG accreditation aims to define a high-quality, safe and appropriate endoscopy service, delivered by a highly trained and well-supported workforce. To date, 535^6^ services are participating in the JAG accreditation scheme in the UK. It is likely that this number will continue to grow, contributing to the formation of new standards within the speciality and scrutinising best practice, workforce engagement and patient experience to achieve an improved level of service and satisfaction both for practitioners and patients.

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What solutions are available to meet current challenges and future-proof services?

There are a number of avenues that hospitals can pursue to offset the current capacity and workforce pressures within endoscopy services. Outsourcing to either private hospitals or to a managed service company ensures that bottlenecks in patient flow can be alleviated, without the hospital staff or resources facing an extra patient burden. This is an established practice within the speciality, but it has potential drawbacks. It means that hospitals lose control over the patient pathway, and with that control they are also giving up the revenue that comes with those patients. In the current constrained financial environment, any loss of revenue presents additional difficulties to already-stretched hospitals.

To circumnavigate these issues, there is another option available to hospitals. Mobile healthcare facilities, which can be installed on site within a matter of hours and require only a short commissioning period to become operational, can provide additional capacity for Trusts to temporarily increase patient throughput in response to increased demand. These flexible spaces enable hospitals to increase their physical space and some suppliers also offer clinical support staff and equipment, lessening the strain on internal hospital resources. Once the facility is no longer needed, with contract periods typically spanning anywhere from three weeks to six months to fit the hospital’s requirements, it can simply be removed from site. The clinical environment provided by these facilities is safe and highly efficient; more than 45,000 procedures have been conducted inside mobile endoscopy suites supplied by Vanguard Healthcare Solutions, allowing hospitals to maintain control of their patient pathways and the crucial revenue they accrue through patient activity.

Future-proofing endoscopy services within the NHS can be addressed in a number of ways by utilising these solutions. Investing in flexible infrastructure is an effective strategy to support Trusts to achieve JAG accreditation, helping them to stay ahead of ever-changing standards and patient expectations. An installation of a mobile endoscopy suite at Hampshire Hospitals NHS Foundation Trust not only created the additional capacity required to successfully treat nearly 1,800 patients, but also opened the door to JAG accreditation. The mobile unit enabled Hampshire Hospitals NHS Foundation Trust to meet the timeliness component of the Endoscopy Global Rating Scale (GRS). Although only a stepping stone in the accreditation pathway, achieving targets for urgent, routine and re-scope waits is of vital importance. Consequently, the hospital could demonstrate continual improvements in its processes and patient confidence in services.

Refurbishment of existing facilities is an effective way of prolonging their life too, delaying the need to invest large amounts of capital into developing new infrastructure. Mobile healthcare units allow Trusts to decant patient flow to an alternative, appropriate clinical setting, maintaining patient and revenue flow while refurbishment works are ongoing. The development of fully HTM compliant mobile endoscope decontamination units allows endoscopy departments to maintain endoscope reprocessing capability during downtime, avoiding costly outsourcing. The unit produced by Vanguard Healthcare Solutions has the capacity and technical capability to process up to 120 scopes per day, enabling it to keep up with the demands of the modern-day endoscopy service.

**Mobile healthcare units in action – a case study**

These were the challenges faced by Bedford Hospital NHS Trust recently when it looked to expand and improve its endoscopy services. The hospital serves a population of over 270,000 people in north and mid Bedfordshire; over 9,000 patients pass through its endoscopy department every year, with that figure rising by 20% annually. True to its ethos that ‘every patient matters’, the Trust
undertook a £3.3 million development of the department to secure a high-quality experience for its patient community. The expansion of the department included two new procedure rooms, as well as a reception, single-sex changing facilities, consultation rooms and a decontamination unit. In addition to the new facilities, renovations were proposed to the existing endoscopy procedure rooms.

The extent of the work being carried out to improve the department posed potential disruptions to the services offered at Bedford Hospital. To meet the challenge to the hospital’s endoscopy capacity during the project, the Trust engaged Vanguard Healthcare to provide supplementary facilities via a mobile endoscopy unit. The facility was designed to offer a total clinical solution for endoscopic treatment, allowing the Trust to utilise it as an independent unit if necessary. As well as a purpose-built procedure room, the unit houses a 6-bed recovery ward, reception, waiting and discharge areas. Ensuring the risk of infection is minimised, the suite also features a pass-through endoscope washer-disinfector between the utility and processing rooms.

The hospital utilised the mobile facility throughout the development process. On site for a year, the unit enabled the Trust to deliver vital diagnostic and therapeutic treatment to over 2,500 patients. This additional capacity allowed the endoscopy department to maintain efficient patient flow throughout the development, affecting not only patient outcomes but also protecting a vital revenue stream. The hospital’s improved endoscopy unit was highly praised in a report by JAG. The report described the development of the department as a “significant transformation” and praised the unit for offering an “excellent, modern and patient-centred experience”.

We may have made advances in many areas which will improve the effectiveness of diagnostic testing and potentially alter therapeutic treatment methods in the future, but Trusts still need to find solutions that can bridge the gap between patient need and the many constraints facing NHS hospitals. Flexible infrastructure offers a responsive, reliable option to support endoscopy departments in delivering top quality services, helping them to address not only the concerns of today but also to prepare for the challenges of tomorrow.