

## 9. RESOURCES FOR PELVIC FLOOR SERVICES

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### Definition

Pelvic floor services include the investigation and treatment of patients with pelvic floor pathology. This includes those with faecal incontinence, obstructed defaecation, constipation, pelvic organ prolapse and chronic pelvic or anal pain. The treatment of these conditions inevitably involves a multi-disciplinary approach and team. In addition to coloproctology, the main specialities involved are gynaecology, uro-gynaecology, urology and geriatrics. The MDT should also include specialist nursing, physiotherapy, clinical scientists, radiology and on occasion chronic pain specialists.

### Workload

The chapter will initially review current practice in the UK. Specifically, using a questionnaire sent to all hospitals in the UK, the present state of pelvic floor services will be reviewed to establish which institutions are carrying out investigations and treatment and what the demand is for these tests / treatment, per head of population (500,000). The following will be reviewed:

- Staff support: Consultant clinicians (Coloproctologist, Gynaecologist, Uro-gynaecologist, Urologist, Gastroenterologist, Geriatrician, and Chronic Pain Physician), nurse specialist/consultant, physiotherapist, clinical scientist, research fellows and organisational support.
- Specialist investigations: Anorectal physiology; dynamic imaging investigations (anal/pelvic ultrasound, fluoroscopic and MRI proctography).
- Multidisciplinary team (MDT) process to establish who is presently involved and what proportion of institutions have access to a full MDT.

- Available treatments: To establish the availability of advanced bowel management and biofeedback in the UK. This will also assess the likely demand for this service and the distribution of expertise across the Nation to assess healthcare service imbalance. Treatment review will also include adjunctive ambulatory procedures e.g. percutaneous tibial nerve stimulation (PTNS) and ascertain which operative procedures are available in which institutions.
- Uptake to R&D: we will record the spread of National involvement in National / Local research and the uptake of entering patients in clinical trials / databases.

Having established the demand for pelvic floor services, by reviewing how this demand is met, we will be able to guide the likely need per head of population. We will also advise on the design and construction of the MDT. It is anticipated that the demand for pelvic floor services will increase over the next ten years and this will be taken into account in the guidelines. There are some guidelines on the management of the more common pelvic floor problems and these will be detailed below.

### Best Practice for Pelvic Floor Services

The management of pelvic floor pathology is a relatively new discipline with evolving working practice between surgical and none-surgical specialties. The traditional compartmentalised and fragmented approach to treatment fails to address the cross-specialty nature of the disorder and frequently fails to resolve the problem. In addition the repertoire and complexity of surgical procedures available for pelvic floor disease (PFD) has increased dramatically over the last decade. Defining treatment pathways, exhausting conservative therapy before moving to surgical treatment demands careful multi-group (MDT) appraisal. Summarising best practice is not straightforward and published evidence for it is as such lacking.

### *Prevalence and impact*

It is estimated that faecal incontinence (FI) affects 10% of the female adult population with some studies suggesting it may be even higher, up to 15% of the population over 18 years old (1). In 2005 Bharucha and colleagues (2) undertook a postal questionnaire to a random sample of 5,300 women of all ages (including nursing homes), with a response rate of 53%. They found an overall prevalence of around 12%. The incidence increases with age with 7%

suffering from it in 20-29 age group compared with 22% in the 50-59 year old group. In nursing homes this rises to around 50% (3). Its effects can be devastating with a clear association with anxiety, depression and poor quality of life (QOL) (4,5). Bharucha (2) found that nearly a quarter of all those with FI had a moderate to severe impact on one or more domain of QOL. In those who gauged their FI to be significant 82% reported a moderate to severe impact on QOL. Aside from the high prevalence of FI the future demand for pelvic floor services is likely to increase further driven by public expectation, technological advances, an aging population and increasing prevalence of predisposing factors such as diabetes and obesity. Best estimates indicate a rise in healthcare demand by over 50% in the next 30 years (6).

Constipation affects nearly everyone at some stage in their life to some extent. However, some people suffer chronic symptoms that seriously impair their quality of life and which require medical intervention. They have a longer duration of symptoms (more than 6 months) and will have failed to respond to basic measures e.g. exercise, increased fluid intake, simple diet changes and laxatives. This problem affects 1 in 10 people, especially women, with about 1 in 50 people seeking specialist hospital management. Patient dissatisfaction is high, nearly 80% feel that laxative therapy is unsatisfactory and the effect of symptoms on QOL is significant. Chronic constipation consumes significant healthcare resources; it is estimated that in the UK 10 per cent of district nursing time is spent on constipation and the annual spend on laxatives exceeds £100m.

Chronic constipation can be remarkably difficult to treat effectively, even in specialist units, resulting in a significant and sometimes severe impact on quality of life. Current approaches include laxatives, newer drugs, nurse-led bowel retraining programmes, bowel (anal) irrigation, and a variety of surgical operations that have variable, and sometimes very poor, results.

#### *Current UK guidelines*

In 2014 the National Institute of Clinical Excellence updated its guidance on FI (7). In developing its summary and recommendations it employed the advice of expert surgeons, a gastroenterologist, incontinence nurses, women's health physiotherapists, midwives, continence advisors and the lay public. It considered the highest available level of evidence base available in the literature and excluded reports from pre 1990. Cost effectiveness was

considered in generating its recommendations. As such the report provides us with the best evidence we have for best practice of pelvic floor disorders. The summary of its conclusions for best practice were that patients suffering with FI were:

- That the condition only be managed by those with the appropriate and relevant skills;
- At risk groups such as the elderly, multiparous females, those with pelvic floor prolapse, and those with cognitive impairment should be identified and appropriately managed according to their needs;
- Clinical assessment through history and examination was required and that exclusion of luminal bowel disease was paramount;
- Conservative management strategies were safe and cost effective and should be employed as first line therapy in most cases. This includes optimising stool type, advice on toilet positioning, involving support groups and developing patient centered coping strategies for the patient's particular needs. If these measures fail then introducing medication, the use of plugs, rectal irrigation, bio-feedback and electro-stimulation should be considered;
- Specialist assessment through ano-rectal physiology, ultra-sound and proctography may be required if the above measures fail to achieve improvement;
- Only surgeons with the appropriate experience and expertise should be involved in the surgery for this condition. These must have open discussion as to the risk and likely outcome from such intervention;
- Surgery that might be considered includes anal sphincter repair and sacral neuro-modulation with both considered cost-effective in the appropriately selected cases.

NICE guidelines in constipation are limited to constipation in children and technology appraisals of the prokinetic agents Prucalopride, Lubiproston and Linaclotide as well as STARR (Stapled Trans Anal Rectal Resection); there has been no technology appraisal of Laparoscopic Ventral Rectopexy.

#### *Current Service delivery*

There is consensus that primary care resources are underutilized and access to specialist care is variable, often inappropriate and that there are unacceptable delays. In 2010 Davis et al (6) published results of a scoping study exploring current service provision. Responses from nearly 250 expert clinicians involved in frontline services across the 10 strategic health

authorities in England were collected. They represented members from the International Continence Society (ICS), the Association of Coloproctology of Great Britain and Ireland (ACPGBI), the Royal College of Nursing (RCN), continence and stoma advisors, pelvic floor physiotherapists and general practitioners although representation from the latter was comparatively sparse. Literature evidence from 36 studies sourced from a total of over 2000 published papers that focused specifically on service provision was included. The authors concluded that initial treatment strategies in the UK were broadly similar following a pathway of treatment escalation as outlined in the 2007 NICE guidance (7). Most primary care clinicians referred patients with pelvic floor disorders either to a hospital consultant, physiotherapist or continence advisor. Very few arranged second appointments or attempted to advise on the condition themselves. There were four main models of healthcare delivery: the single practitioner, sub-specialist using MDT practice model, cross speciality and across boundary referral. The majority were in the first two groups and most used a triage system to help direct primary care referral. Nurses were in attendance in 40% and pelvic floor physiotherapists in 50% of clinics. Two thirds of the consultants ran a practice with infrequent and ad-hoc MDTs. Most surgery was conducted on a compartmental model with only one in three surgeons undertaking combined operations.

#### *Suggested areas for improvement*

Davis's Study indicated that a combination of external and internal organisational change is needed to change what is perceived as a fragmented, highly variable and poorly integrated approach to PF service in the UK. Models in other countries have demonstrated improved synchronised care and team working and are a useful guide to future development in the UK (8,9). It was specifically suggested that:

- Access and availability of specialist services be increased. There was concern that PFD was considered low priority and that there was lack coherent strategy. GPs needed a defined pathway of referral;
- Team working. Improving inter-professional referral and streamlining pathways within hospitals. Avoidance of multiple hospital reviews by different specialists leading to frequent duplication of investigation and treatments. That treatments should be more standardised, for example – nurse practitioner and physiotherapy advice frequently differed;

- Funding and investment. There is too often insufficient time and lack of available resource hampering one-stop MDT services. This problem is compounded by target driven healthcare;
- Information and research. Patient information leaflets should be made more widely available. There should be standardised data collection and collaborative work between centres delivering this service.

### Pelvic Floor Census Results

During 2014 all hospitals in Great Britain and Ireland on the ACPGBI register were sent a questionnaire asking specific questions regarding local pelvic floor services. Unit responses were categorised as those units without in-house pelvic floor services, those with a regional service and those considered as providing a tertiary service.

Sixty-seven centres responded to the questionnaire survey (over 75 % of those hospitals where a consultant surgeon is a member of The Pelvic Floor Society). The main findings in the 67 respondents were:

#### *Infrastructure:*

- 104 Consultant Surgeons in 67 NHS hospitals identified themselves as providing a pelvic floor service.
- Twenty-six (39%) were tertiary referral centres for pelvic floor surgery, 32 (48%) performed some pelvic floor surgery and 9 (13%) did not perform any or very little. Of the tertiary referral centres 96% served a population of over 500,000. All other centres served a population of 250,000 – 500,000.
- The median total number of colorectal surgeons per unit was 6 for the tertiary referral centres and 5 for both other groups. The mean proportion of colorectal surgeons with an interest in pelvic floor surgery was 30% in the tertiary referral centres and 38% in those centres performing some pelvic floor work.
- Of tertiary referral centres, half had at least one whole time equivalent consultant solely performing pelvic floor work (median whole time equivalent 0.88, range 0.25 to 2.5). Of those centres performing some pelvic floor work 41% had at least one whole time equivalent consultant (median 0.75, range 0.2 – 1.75). The mean whole time equivalent

for tertiary centres was 1.03 compared with 0.77 WTE for regional centres who do some pelvic floor work.

- 81% of tertiary referral centres and 56% of units performing some pelvic floor surgery ran specific pelvic floor clinics, which were held weekly in the tertiary referral centres (mean 1.3, median 1, range 0.2 – 3.5 times per week). 58% of other centres running pelvic floor clinics held them at least once a week (mean 0.84, median 1, range 0.25 – 2 times per week).
- 69% of tertiary referral centres and 38% of centres performing some pelvic floor surgery ran joint clinics with allied health professionals or consultants from other specialities. All joint clinics were attended by a colorectal surgeon. The proportion of joint clinics attended by different specialists is outlined below.

Proportion of joint clinics attended	Tertiary referral centres	Centres performing some pelvic floor surgery
Colorectal Surgeon	100%	100%
Gynaecologist	75%	58%
Urologist	31%	25%
Physiotherapist	38%	75%
Nurse Specialist	81%	50%

Table 9.1 Attenders for joint clinics

- 38 of the 67 hospitals said that they hold regular Pelvic Floor Multidisciplinary Meetings (MDM). Only 80% of tertiary referral centres, but 59% of centres performing some pelvic floor work, held an MDM. 33% of tertiary referral centres and 32% of other units holding an MDM did so in conjunction with another unit and 4% of those from tertiary referral centres and 16% of those from other units attended an MDM elsewhere.
- The proportion of MDMs attended by a gynaecologist, urologist, radiologist, clinical scientist, nurse specialist, gastroenterologist or administrative staff is outlined below. The majority of centres from both groups attended an MDM once monthly (61% of tertiary centres and 47% of centres performing some work). The mean number of cases discussed in each MDM in the tertiary referral centres was 9 and 9.3 for those other centres.

Proportion of MDMs attended by a:	Tertiary referral centres	Centres performing some pelvic floor surgery
Colorectal Surgeon	100%	100%
Gynaecologist	86%	95%
Urologist	60%	6%
Radiologist	76%	76%
Physiotherapist	71%	71%
Clinical Scientist	48%	80%
Nurse Specialist	86%	81%
Gastroenterologist	43%	10%
Administrative Staff	38%	52%

Table 9.2 Attenders of a pelvic floor MDT

- With regard to clinical testing, 95% of tertiary centres had an anal ultrasound, ano-rectal physiology service with 96% having defaecation proctography and 50% having MRI proctography available. This compared with 50% of centres with an interest in pelvic floor pathology of whom only 17% had MRI proctography. The physiology service was run by a clinical scientist in 70% of tertiary centres and 44% of regional centres, with the remaining tests being carried out largely by the consultant surgeons or a specialist nurse. Tertiary centres carried out an average of eight physiology and ultrasound tests per week, but some centres had a much larger work load (up to 35 cases / week), compared with 5 per week in regional centres (maximum 20 / week).
- At tertiary centres there was general agreement as to the composition of physiological assessment with 92% measuring maximum voluntary and involuntary (resting) sphincter pressure, maximum tolerated rectal volume and assessing the recto-anal inhibitory reflex, compared with only 50% of regional centres investigating these variables. By comparison pudendal nerve latency and EMG studies were far less commonly measured (23%).

*Workload:*

- Estimating workload from the questionnaire returns was problematic since there was great variation in reported numbers between units, especially from tertiary referral centres.



- There was a median of 35 new cases / month referred to these centres with numbers in some centres reaching 185 cases / month, compared with 25 cases / month with a maximum of 245 cases / month for those regional centres with an interest in pelvic floor disorders.

*Treatments:*

- Biofeedback was available in 88% of tertiary centres seeing a mean number of 130 patients per annum (maximum number seen 550) equally split between those with constipation and those with incontinence. This compares with 78% of regional centres, treating 33 patients / year (maximum 160). Rectal irrigation is offered in both centres equally (88%).
- Neuromodulation was available in the form of sacral nerve stimulation in 25 hospitals; 65% of tertiary centres and only 28% of regional centres, with similar numbers offering percutaneous tibial nerve stimulation. Where performed, neuromodulation with SNS was performed on similar numbers of patients between the two types of centre with a mean number of cases per annum of 30, with two thirds being for incontinence and one third for constipation.
- The mean and median number of surgeries performed in the centres per year is detailed in Table 9.3:

Procedure Mean, Median (Range)	Tertiary Referral Centres	Centres performing some pelvic floor work	Centres with no pelvic floor interest
Perineal procedure for prolapse	8.25, 7 (1 – 20)	9.5, 8 (1 – 25)	9.9, 8 (0 – 15)
Abdominal posterior resection rectopexy	3.95, 2.5 (0 – 18)	2.8, 2 (0 – 14)	3.1, 2 (0 – 15)
Ventral Mesh Rectopexy	24.4, 20 (0 – 84)	12.26, 12 (0 – 30)	2.7, 3 (0 – 6)
Perineal rectocoele repair	9.45, 3 (0 – 40)	6.12, 4 (0 – 36)	2.5, 0 (0 – 10)
Sphincter repair	3.98, 4 (0 – 10)	2.8, 1.5 (0 – 10)	1.4, 0 (0 – 0)
STARR	1.5, 0 (0 – 10)	4.64, 0 (0 – 27)	0

Open rectopexy	2.05, 2 (0 – 10)	1.3, 0 (0 – 15)	1.6, 1 (0 – 5)
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Table 9.3 The number of surgeries performed in centres per year.

It is clear that complex abdominal pelvic procedures are largely carried out in the tertiary centres with half the number in regional centres. Perineal procedures for prolapse have generally been considered part of standard colorectal surgical practice and so as expected they are performed almost equally between the different types of institutions. There is some concern however that there are some cases of complex pelvic floor surgery being carried out in units with no pelvic floor interest and importantly no or limited access to an MDT process.

*Training:*

- A total of fourteen hospital units offered pelvic floor research fellowships and six offered post CCT Fellowships.

Overall Recommendations

The evidence detailed above allows the development of pelvic floor services in 3 key areas; the pelvic floor MDT (see also the MDT chapter), accreditation of units and the role of The Pelvic Floor Society. These factors and recommendations for structure and function are discussed in detail in appendix 1.

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