



HAL
open science

Pelvic floor dysfunction: A scoping study exploring current service provision in the UK, interprofessional collaboration and future management priorities

Kathryn Julie Davis, Devinder Kumar, Martyn Wake

► **To cite this version:**

Kathryn Julie Davis, Devinder Kumar, Martyn Wake. Pelvic floor dysfunction: A scoping study exploring current service provision in the UK, interprofessional collaboration and future management priorities. *International Journal of Clinical Practice*, 2010, 64 (12), pp.1661. <10.1111/j.1742-1241.2010.02509.x>. <hal-00585811>

HAL Id: hal-00585811

<https://hal.science/hal-00585811v1>

Submitted on 14 Apr 2011

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



HAL Authorization



Pelvic floor dysfunction: A scoping study exploring current service provision in the UK, interprofessional collaboration and future management priorities

Journal:	<i>International Journal of Clinical Practice</i>
Manuscript ID:	IJCP-02-10-0138.R2
Wiley - Manuscript type:	Original Paper
Date Submitted by the Author:	08-Jul-2010
Complete List of Authors:	Davis, Kathryn; City University, Consortium for Healthcare Research; St George's Healthcare Trust, Colorectal Department Kumar, Devinder; St George's Healthcare Trust, Colorectal Department Wake, Martyn; Church Lane Practice, General Practice
Specialty area:	



1
2
3 Pelvic floor dysfunction: A scoping study exploring current service provision in the UK,
4 interprofessional collaboration and future management priorities
5
6
7

8 Davis KJ¹ Kumar D², Wake MC³
9

10
11 ¹Davis K. Postdoctoral Research Fellow, Consortium for Healthcare Research, City
12 University, Department of Community and Health Sciences, Philpot Street, London, E12EA

13 ²Kumar D. Professor of Gastrointestinal Surgery, Department of Colorectal Surgery,
14 St George's Healthcare NHS Trust, Blackshaw Road, London SW17 0QT
15
16

17 ³Wake M.C. Senior Partner, Church Lane Practice, Church Lane, Merton, London SW19
18 3NY & Joint Medical Director Merton and Sutton PCT, London SW20 8DB
19
20
21
22
23
24
25
26
27

28 Corresponding author: K Davis

29 Tel: 00 44 725 1302

30 Fax: 00 44 725 3916

31 Email: Kathryn.Davis.1@city.ac.uk
32
33
34
35
36
37
38

39 Disclosures

40 The authors have no financial or other potential conflicts of interest in the subjects in the
41 manuscript.
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Abstract

Objective

Pelvic floor dysfunction(PFD) has a significant socioeconomic and healthcare cost. This study aimed to investigate current service provision for PFD in the UK, highlighting any gaps and areas for improvement to inform future service improvement.

Methods

A three phase design comprised a scoping literature review, consultation survey with frontline practitioners from four key professional groups and an overarching synthesis. An interpretative analytical framework was informed by the concepts of interdisciplinary and interprofessional collaboration.

Results

Empirical evidence on PFD service provision is limited. No overarching strategic approach to PFD as a single clinical entity in the UK was identified. Two hundred and forty three medical, nursing and physiotherapy practitioners from different clinical subspecialties participated in the survey. Access and availability to services, models of delivery and individual practice vary widely within and across the disciplines. Time restrictions, mixed professional attitudes, lack of standardization and low investment priority were identified as major barriers to optimal service provision. Five overlapping areas for improvement are highlighted: access and availability, team working and collaboration, funding and investment, education, training and research, public and professional awareness.

Conclusions

Current services are characterized by a fragmented approach with asynchronous delivery, limited investment and poor interprofessional integration. An improved service delivery model has the potential to improve outcomes through better interdisciplinary collaboration and efficient use of resources.

Key words. Female, pelvic floor dysfunction, services, interdisciplinary care, collaboration

1
2
3
4
5 What's known
6

7 PFD comprises symptoms ranging from bothersome to debilitating that are challenging to
8 patients and healthcare professionals in primary and secondary care and have
9 substantial NHS healthcare cost implications. PFD is a multi-disciplinary issue that
10 concerns a wide range of healthcare practitioners. Traditionally, its management has
11 followed a clinically compartmentalised and fragmented approach that potentially is failing
12 to address multicompartmental symptomatology and resulting in an incomplete resolution
13 of the problem.
14
15
16
17

18
19
20 What's new
21

22 This study has highlighted gaps and inconsistencies in current service provision for
23 women with PFD. There is under utilization of primary care resources and variable
24 access and availability to specialist care. Management pathways are further
25 compromised by circuitous routes of referral, treatment and diagnostic delays, duplication
26 of effort and inappropriate referrals to specialist services. New ways of working with
27 improved Interdisciplinary service provision have the potential to improve outcomes of
28 care.
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4
5 *Text Revised and reduced in length*
6
7

8 **Background**

9
10 Pelvic floor dysfunction(PFD) presents an increasing clinical challenge and financial burden
11 to the National Health Service. Against a background of rising public expectations,
12 technological advances, increasing prevalence of predisposing factors such as obesity,
13 diabetes and, an ageing population it is predicted that future demand for PFD-related
14 healthcare will rise by 50% over the next 30 years, potentially stretching current service
15 capacity^[1]. PFD comprises symptoms that are associated with anatomical and functional
16 disturbances of the lower urinary tract and micturition, lower gastrointestinal tract and
17 defaecation and/ or sexual function^[2,3]. These range from being bothersome to debilitating
18 and are challenging to patients and healthcare professionals in primary and secondary care.
19 Although PFD is common among women of all ages, the risk of developing symptoms rises
20 steadily in middle and older age affecting an estimated 40% of women aged between 65-70
21 years increasing to 50% in those over 80^[4]. It is estimated that than one in ten older women
22 will undergo surgery for PFD with as many as 30% of these requiring further surgery for
23 symptom recurrence^[5]. Traditionally management of PFD has followed a clinically
24 compartmentalized and often fragmented approach that may, due to variable access and
25 availability to integrated services, be failing to address multi-compartmental symptomatology
26 and resulting in an incomplete resolution of problems. This study presents the findings of
27 preliminary study undertaken to investigate current service provision for women seeking
28 treatment for PFD in the UK. Data gathered from a range of healthcare practitioners working
29 in different specialty areas and mapped against relevant policy and documentary evidence is
30 used to enhance a scoping literature review. The professional groups studied include nurses,
31 doctors and physiotherapists with a specific interest in women's health.
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46

47 **Aims and Objectives**

48 The primary aim of this scoping study is to investigate and synthesize evidence on current
49 service provision in the UK. The secondary aim was to highlight priority areas for change to
50 inform future service improvement and research. The following objectives were refined to aid
51 the identification and interpretation of evidence;
52
53
54

- 55 • Identify the range, nature and extent of services
- 56 • Determine models of service provision and levels of interdisciplinary practice
- 57 • Ascertain the experiences, views and needs of frontline service practitioners in
58 relation to current and future PFD service provision
59
60

Methods

A three phase structured design comprised:

(1) Concurrent scoping literature review and analysis of relevant research, documentary and policy evidence

(2) Consultation with frontline practitioners

(3) Overarching synthesis

This phased approach was deemed appropriate in the light of the complexity of the topic area and limited existing research evidence. The main strengths of a scoping study lie in its ability to extract the essence of a diverse body of evidence and give meaning and significance to a topic that is both developmental and intellectually creative. The concepts of interdisciplinary and inter-professional collaboration provided an interpretative analytical framework for this study^[6]. The underlying principles of sharing, partnership, power, interdependency, and process were used to guide data extraction, appraisal and synthesis. The primary research questions posed were; *What type of service provision is available to women seeking treatment for pelvic floor disorders and what level of inter-professional collaboration exists?*

(1) Scoping literature review strategy

Our approach followed established methods for a scoping literature review^[7,8]. The review process comprised: establishment of the analytical framework, definition of key concepts and search terms, identification of key data sources, charting of the evidence, expert consultation and a summary analysis of the findings. Eight electronic bibliographic databases were searched including Cochrane Database of Systematic Reviews. These searches were supplemented by the pursuit of grey literature retrieved through secondary references, hand searching non-index linked publications and, advice from experts in the field. A systematic search strategy was used based on keywords comprising explicit single and combined terms relating to the topic (for example pelvic floor and pelvic floor dysfunction/disorders, incontinence and continence as free text and related indexed terms) and, the target population (women). A second layer of keywords such as multidisciplinary, interdisciplinary, integrated service and inter-professional collaboration were then used to refine the search. To ensure comparability and applicability of research findings, we focused our review on publications specific to services for women with pelvic floor disorders. Additional limitations were employed to include only material that was published in the English language and reported on service provision from 1990 to 2009 to ensure current relevance. Policy documents, reports and position statements relevant to the management of women with PFD in the UK were also sought using the following databases; - Department of Health National

1
2
3 Institute for Health and Clinical Excellence(NICE) (government agencies) the Health Care
4 Commission (healthcare agencies), Royal Colleges and professional bodies and, charitable
5 associations such as The International Continence Society.
6
7
8

9
10 (2) *Consultation*

11 To elicit the expert views held by UK healthcare practitioners already engaged at the frontline
12 of practice and enhance the findings of the scoping literature review, a questionnaire survey
13 was conducted among a purposive sample of health care professionals. These were initially
14 sought through contact with the UK membership of a wide range of groups and associations
15 including; The International Continence Society, Association of Coloproctology of Great
16 Britain and Ireland, UK Royal College of Nursing's Continence, Stoma and Gastroenterology
17 and Nurse Practitioner Forums, Women's Health Chartered Physiotherapists(ACWHP),
18 Royal College of General Practitioner Academic faculty groups in addition to local meetings
19 and seminars. The questionnaire was piloted among a convenience sample of eight
20 specialist practitioners. Following minor revision the final versions were made available for
21 completion. The questionnaires comprised a series of open and closed questions that sought
22 information about individual professional roles and practices, range of symptoms assessed,
23 management and treatment strategies employed, pathways of referral within and across
24 specialties, use of existing national guidelines/protocols and treatment outcome measures.
25 The following final free text question, asked to each of the professional groups, canvassed
26 opinions and recommendations on service improvements; *"In order to provide optimal
27 services for women with pelvic floor disorders, particularly to women with co-existing
28 symptoms relating to pelvic organ prolapse, bowel, bladder and sexual function, what service
29 developments/improvements do you think are required?"*
30
31
32
33
34
35
36
37
38
39
40
41
42

43
44 It is not uncommon to use more than one method of purposive sampling techniques and in
45 this phase three specific types were used;
46

- 47 • critical case sampling to elicit participants who exemplified key characteristics of PFD
48 service provision, for example those who had published/lectured on PFD
- 49 • snowball sampling to determine other suitable participants; and
- 50 • maximum variation sampling that sought a range of participants from different
51 disciplines to ensure that our data was reflective of a diversity of experiences.
52

53
54 Each respondent received a copy of the study information so that they could decide in
55 advance whether they wished to participate. A prepaid-reply envelope was provided to those
56 returning completed questionnaires by surface mail. Consent was accepted if the
57
58
59
60

questionnaire was completed and returned. Two follow up reminders were made to non respondents at 4 and 8 week intervals.

(3) Data Synthesis

An interpretative analysis of the survey, documentary and literature data was undertaken by the PI and then discussed among the researchers. Summary descriptive statistics and manifest content analyses were the primary tools used for categorising and identifying emerging themes. The findings are synthesized and presented in the form of a narrative summary. The literature and documentary evidence was managed in a word program with quantitative survey data managed and analysed using SPSS™ version 11 (SPSS inc, Chicago, IL USA).

Ethical consideration

The UK National Research Ethics Service declared this study a service evaluation that did not require further ethical review by local Ethics Committees.

Results

Only 36 papers of over 2000 publications potentially focused on aspects of service provision and were selected for further review. Twenty one were considered eligible for inclusion [9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,29,30]. Five (published across 7 publications) provided a holistic functional perspective of the evaluation and management of PFD and potential benefits of collaborative, multidisciplinary approaches in relation to both outpatient and surgical service delivery [10,11,14,17,19,22,24]. The remainder focused on service provision in terms of just one aspect of PFD (urinary incontinence [9,12,13,15,16,18,20,21,23,25,26,27,29,30] or pelvic organ prolapse^[15]). These papers tended to focus on the heterogeneity of access, appropriateness and treatment provision, service inconsistency and fragmentation, the importance of multidisciplinary team work and the need for greater service integration. Unlike other countries such as the United States of America^[31] and Australia^[32] who have developed National Women's Health policies to ensure that the planning and delivery of health services best meets the needs and improves health and well being of women in their respective populations, no national overarching strategy for women's health and PFD in particular, was identified for the UK. Although numerous sources providing a wide range of commissioning guidance's, treatment pathways and protocols for specific aspects of PFD, were identified (Table 1).

The frontline survey highlighted a number of issues associated with the provision and delivery of pelvic floor services. However, in the absence of a national association or

1
2
3 database of practitioners with a special interest in PFD and the decision to use a variety of
4 sampling techniques, final response rates were unable to be calculated. The two most
5 difficult professional groups to access, despite positive liaison with representatives of their
6 respective professional forums, were the GP's and nurse specialists. In light of a very small
7 national GP response(26) the steering committee agreed that the focus of further efforts to
8 gather the views of GP's should be placed on establishing a representative cohort. This
9 involved recruiting GP's from 56 practices in one large, urban Primary Care Trust. GP's from
10 19(32%) of these practices responded.

11
12 Following reflective discussion between the researchers analysis of the survey data focused
13 on three key dimensions (i) demographics and professional characteristics of practitioners (ii)
14 management of PFD and models of healthcare delivery and, (iii) priority areas for
15 improvement.

16
17
18
19
20
21
22
23
24
25
26
27 *(i) Demographics and professional characteristics*

28 We recruited 243 practitioners including 95(39%) specialist physiotherapists, 63(26%)
29 medical consultants, 45(19%) general practitioners (with a cohort of 19 from one PCT) and,
30 40(16%) specialist nurses, from a variety of clinical subspecialties (Table 2). They were
31 geographically spread across the ten Strategic Health Authorities in England with a small
32 number responding from services based in Scotland(10), Wales(6), Northern(8) and
33 Southern Ireland(6) and, the Channel islands(1) (Figure 1). Eighteen (45%) of the nurses
34 worked exclusively within primary care with the exception of 2 general practice-based,
35 nurse practitioners, the remainder were continence nurse advisors, 16(40%) within secondary care(
36 5 colorectal, the remainder in urogynaecology) and 6(15%) worked across primary and
37 secondary care(providing continence care). Of the 95 physiotherapists, 22 (23.1%) worked
38 in primary care(6 worked in dedicated continence services with 1 in private practice),
39 48(50.5%) in secondary care, 25(26.3%) provided services across primary and secondary
40 care. All declared a specialist interest in women's health physiotherapy with 13 having full
41 membership of the clinical interest group the Association of Chartered Physiotherapists in
42 Women's Health(ACPWH). Three provided extended-scope practitioner services. **The
43 medical consultants worked in District General, Secondary and Tertiary Hospitals. The
44 proportion of time estimated to be devoted to PFD was 60-100% by urogynaecologists, ≤
45 20% by the urologists and colorectal surgeons and less than 1% of the GP's practice.**

46
47
48
49
50
51
52
53
54
55
56
57
58
59 *(ii) management of PFD and models of healthcare delivery*

60 **➤ management**

1
2
3 The management of PFD varied widely across the disciplines and between practitioners.
4 Medical consultations were greatly restricted by time compared to specialist nurses and
5 physiotherapists who were able to arrange longer appointments (45-60 minutes) and
6 generally involved additional symptom severity and quality of life assessment measures and
7 pelvic examination. Of the GP's only 2 recommended a second appointment for further
8 assessment, examination and discussion. Four referred directly either to a hospital
9 consultant, women's health physiotherapist or continence nurse advisor rather than manage
10 symptoms themselves. The initial treatment strategies described by the group collectively,
11 were broadly similar. First line management comprised lifestyle interventions, diet and fluid
12 manipulation, bowel and bladder retraining, evacuation techniques, pelvic floor muscle
13 exercises, vaginal pessaries and pharmaceutical therapies prescribed as required. Generally
14 the guidelines for Urinary Incontinence(UI)^[33], Faecal Incontinence(FI)^[34] Pelvic Organ
15 Prolapse^[35] were followed however, when asked about the use and usefulness of guidelines
16 in clinical practice, the practitioners views were not universal. Only 3 GP's and 12
17 consultants perceived clinical guidelines as *very useful* while 23 GP's and 38 consultants
18 found them *moderately useful*. The remainder either had not read any guidelines or did not
19 find them useful. For nurses and physiotherapists, clinical guidelines and treatment protocols
20 provided the framework for their practices.

21
22
23
24
25
26
27
28
29
30
31
32
33 ➤ **models**

34 Four distinct models of healthcare delivery were identified; single practitioner-led,
35 multidisciplinary *within-specialty*, *across-specialty* and *cross boundary* (Figure 2). Nearly
36 50% (including the GP's) managed PFD as single practitioners. The majority of the
37 remainder followed a *within-specialty* model and used a combination of different service
38 approaches. Only 33 practitioners worked in *across-specialty* services and just 2 (working in
39 continence) provided cross boundary services between primary and secondary care. Within
40 these three models many practiced formalized triage systems developed to facilitate direct
41 referral pathways to single specialist-led, combined and/or joint multidisciplinary outpatient
42 clinics and diagnostic services. There was one example of a consultant-led outreach clinic in
43 primary care and four secondary/tertiary centres provided dedicated PFD outpatient services.
44 Attendance at regular multidisciplinary team(MDT)-style meetings tended to be confined to
45 practitioners within individual clinical subspecialties in secondary care. The attendance by
46 nurses was less than half 16(40%) and only just over half among physiotherapists
47 49(51.5%). The main reason given for non-attendance was 'no meetings', limited time to
48 attend and logistical difficulties. Complex cases were discussed by 43(65%) consultants at
49 infrequent, *ad hoc* meetings. With the exception of one consultant surgeon who managed all
50 pelvic floor problems as a single specialist surgeon, the majority of consultants preferred a
51 single specialty approach referring patients requiring further surgery for other pelvic
52
53
54
55
56
57
58
59
60

1
2
3 compartmental symptoms on to surgical colleagues as appropriate. Only 23(36.5%) of the
4
5 surgeons participated in combined operative procedures.
6
7

8 *(iii) priority areas for improvement*

9
10 One hundred and ninety nine (81.8%) practitioners provided views on how services could be
11 improved. Of the 44 that declined to offer an opinion, over half were medical staff; comprising
12 15/45 (33.3%) GP's, 16/63 (25.3%) consultants (11 colorectal, 2 urology, 3 urogynaecology),
13 8/95 (8.4%) of the physiotherapists and 5/40 (11.1%) nurses. Using a qualitative
14 methodological approach to the analysis of this data, five overlapping themes identified as
15 priority areas for improvement, were identified;
16
17

- 18 1) Access and availability to specialist services
 - 19 2) Team working and collaboration
 - 20 3) Funding and investment
 - 21 4) PFD education, training and research
 - 22 5) Public and professional awareness
- 23
24
25
26
27
28

29
30 There was consensus that access and availability to specialist care was being potentially
31 compromised due to the low priority and lack of a coherent strategy to PFD. While the
32 perspectives of this theme differed slightly between professional groups, it was generally
33 agreed that circuitous routes of referral, duplication of effort and treatment delays presented
34 particular obstacles to optimal service provision. For example, when symptoms failed to
35 respond to treatment, few specialist nurses and physiotherapists, particularly in primary care,
36 had direct referral access to consultants or specialist diagnostic investigations. Local
37 arrangements commonly required patients be referred back to their GP's for further
38 assessment in order to secure an onward referral. In secondary care similar frustrations were
39 also described in relation to direct referral access to allied health specialties. From the GP's
40 perspective, defined referral pathways to continence advisors, WHP's and hospital services
41 were variable. While for some, local arrangements were good for others access was reported
42 as more difficult for several reasons including; lack of direct referral arrangements to
43 specialist investigations or 'one/two stop' specialist PFD clinics and, uncertainty about the
44 availability or location of local specialist nurse or physiotherapy services.
45
46
47
48
49
50
51
52
53

54
55 Improving inter-professional collaboration was a key issue and supported by numerous
56 recommendations. These included making better use of existing resources to improve
57 communication and coordination between different service fragments, development of a
58 national database, patient-held documentation and, wider involvement of specialist
59 nurse/physiotherapists working in advanced roles to facilitate services and improve earlier
60

1
2
3 access to treatment. Practitioners generally concurred that services needed to shift with the
4 development of more primary care-directed service models that would not only encourage a
5 more synchronous and seamless service approach but, would also have the advantage of
6 freeing up limited specialist secondary/tertiary care resources for patients with more complex
7 problems.
8
9

10
11
12
13 There was universal agreement that greater funding and investment in staff, equipment and
14 training was required if services were to improve and new ways of working were to be
15 developed. Numerous recommendations to achieve standardized approaches to care were
16 made in relation to improving opportunities for inter-professional education and training within
17 and across primary and secondary care settings although specific educational needs tended
18 to differ across the groups.
19
20
21
22

23
24 The need to raise professional and public awareness of PFD as a significant women's health
25 problem was also highlighted and a number of proposals were made that would potentially
26 enhance current services including the provision of more primary care-based and school
27 based educational sessions to promote healthy pelvic floor practices, ante and post natal
28 drop in clinics, self help support groups, better advertising of services and the development
29 of local health service websites, information leaflets and posters.
30
31
32
33
34

35 36 **Discussion**

37 This study suggests that a combination of external (macro) and internal (meso)
38 organizational and, personal (micro) factors are contributing to a fragmented, highly variable
39 and poorly integrated approach to PFD service delivery in the UK.
40
41

42 *At a 'macro' level, the strategic policy approach to women's health care in the UK differs*
43 *significantly from that of other countries* ^[31,32,36] *where through synchronized approaches to*
44 *cross referral and team working, models such as the Calgary Pelvic Floor Disorders Clinic*
45 *(currently being evaluated in Canada)* ^[37] *and the Maimonides Centre for Pelvic Floor*
46 *Dysfunction in the USA* ^[24] *have developed. It could be argued that although the majority of*
47 *women's health services in the UK are well provided through local services, from the views*
48 *expressed by the respondents in this study, there is a suggestion that the tendency to*
49 *subsume or 'piggyback' women's health issues within other areas of health policy could*
50 *result in the multiple causes and consequences of PFD being inadequately addressed. This*
51 *may also explain some of the service inconsistencies we identified and support evidence that*
52 *outcomes in relation to the management of multi-compartmental pelvic floor symptoms are*
53 *suboptimal*^[2,38]. *Another factor to consider at the macro level relates to targets. These have*
54 *become an essential element in the UK Government's plans for modernizing the NHS (DH*
55
56
57
58
59
60

1
2
3 2000)^[39] and despite efforts to move away from a target-driven to a “high quality” service (DH
4 2008)^[40] initiatives like the 18 week commissioning pathways remain important service
5 indicators^[41]. We contend that although such initiatives have gone a long way to improving
6 patient healthcare they are not without their critics particularly when managing the time
7 consuming and often complex problems associated with PFD that require a plural rather than
8 singular approach. Our findings indicate that in patients with multiple symptoms the efficacy
9 of treatment can be limited if a single specialty service position is consistently endorsed.

10
11
12
13
14
15
16 At the ‘meso’ level we found that the majority of practitioners describe broadly similar
17 approaches to care with a high level of autonomy in the provision of services. However, as
18 patients often enter and re-enter the system via many routes and consult with many different
19 practitioners along the treatment pathway, there is potential for patients to be exposed to
20 duplication and delay in treatment (Figure 3). Although there is evidence supporting the
21 clinical and cost effectiveness of more specialist nurse and physiotherapist practitioner
22 involvement ^[9,13,30] confirmation of inter-professional collaboration is limited. We suggest that
23 this may provide an explanation for the predominance of the partitioned, ‘within specialty’
24 model approach identified in this study that, alongside the lack of a standardized approach to
25 managing PFD as a single clinical entity, inhibits service innovation and the development
26 based on locally available expertise of robust, effective integrated services. Another factor to
27 consider at this level relates to the use of and adherence to clinical guidelines. Our findings
28 concur with previous studies^[42] where adherence by practitioners to guidelines developed for
29 the identification and management of bowel, bladder or sexual function, may be only partial.
30 The major reasons highlighted in our study include; insufficient time, lack of available
31 resources especially staffing numbers limited or no access to specialist ‘one-stop MDT
32 services’. The recommendations made by practitioners for new service configurations that
33 include more specialist services being made available within primary care, would appear to
34 offer a solution to this problem. In addition it would facilitate greater opportunities for
35 interdisciplinary professional development and support recent recommendations made by
36 The Department of Health^[43]. We propose that by creating a more synchronized,
37 collaborative, inter-professional approach between GP’s, primary care-located triage hubs
38 and specialist centers, the potential benefits already apparent in other specialties^[44] will
39 become evident.
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55

56
57 Finally, at the practitioner ‘micro’ level, several factors emerged that emphasized links
58 between the pressures on consultation/treatment time and poor resourcing, inadequate
59 knowledge and lack of understanding of the expertise of colleagues and efficacy of
60 treatments. Previous research has shown that patients presenting with PFD are likely to

1
2
3 suffer complex groups of problems which if not routinely enquired about may be under-
4 appreciated and lead to inadequate treatment^[2,3,4]. In addition, the propensity for duplication
5 of effort for assessment and conservative therapies as patients bounce around the system,
6 are further indications that optimal care is being compromised. Our findings suggest that
7 differences in professional attitudes, experiences and knowledge alongside a lack of
8 government directive and financial investment in PFD in the UK has contributed to a degree
9 of professional territorialism and may account for the 'therapeutic nihilism' reported in some
10 studies^[45]. Recommendations from practitioners for more 'protected consultation time', 'ring
11 fenced' clinical arrangements, more inter-professional educational opportunities in addition to
12 improved specialist staffing levels were identified as key areas for improvement.
13
14
15
16
17
18
19
20

21 Conclusion

22 The assessment and management of PFD is time consuming and involves the input of a
23 wide variety of healthcare professionals. This study has highlighted areas which will be of
24 interest to practitioners, providers and commissioners involved in the future planning and
25 delivery of women's health services. Although our survey data cannot be interpreted as
26 representative of the wider views of each professional group because they are based on a
27 self-selected, purposive sample with unknown response rates, we contend that this study
28 affords an opportunity to gain valuable insight into the current views and recommendations of
29 key frontline practitioners working across the different subspecialties. Given the impact of
30 PFD on the health and wellbeing of women and the eminently treatable nature of symptoms
31 regardless of age, early access to specialist health care is important. Raising awareness of
32 optimal service provision for the prevention and management of PFD should be a health
33 policy priority. This study provides for the first time, baseline evidence that exposes a number
34 of barriers hindering the development of specialist integrated services. Our analysis reveals
35 that availability and access to formalized interdisciplinary PFD care in the UK is highly
36 variable. We hypothesize that new service configurations will facilitate greater service
37 collaboration and break down traditional professional boundaries across primary and
38 secondary care and ensure more effective and efficient use of resources. Improving
39 interdisciplinary education and training would also strengthen relationships and change
40 practitioner's views on the benefits of combined management approaches. This will not only
41 lead to improved understanding of the complexity of female PFD but also expose more
42 patients to the range of therapeutic benefits available including pelvic floor health promotion
43 initiatives helping to prevent pelvic floor complications developing later in life, contributing to
44 healthier ageing and well being and improving women's participation in health decision
45 making and health management.
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Authors Contribution

All authors have approved the final draft for submission and had access to the study data. Specific contributions were made in the following areas: Kathy Davis was responsible for the conception and design, data collection, analysis and interpretation of this scoping study. In addition, she was responsible for the preparation, drafting and critical revision of the manuscript. Devinder Kumar participated on the data interpretation, preparation and critical revision of the manuscript for important intellectual content and contributed to statistical analysis of the data. Martyn Wake assisted in the design of the study, facilitating the acquisition of data from general practitioners and critical review of the final drafts of the manuscript.

Acknowledgements

This study was conducted as part of a Postdoctoral Research Fellowship funded by The Burdett Trust for Nursing. The authors would like to thank the ACWPH, CSP, ICS, Associations of Coloproctology of Great Britain and Ireland, UK Royal College of Nursing - Continence, Stoma & Gastroenterology and, Nurse Practitioners forums, UK Royal College of General Practitioners Academic Faculty Groups for access to their membership lists. We would also like to thank Mrs Teresa Lunnis and Mrs Becky Ashton for the piloting of the surveys and their support in facilitating access to specialist physiotherapists and nurses, Mr Jan Poloniecki for his statistical advice and, all of the practitioners who took the time to participate in this study.

Reference List

1. Luber KMM, Boero SM, Choe JYM. The demographics of pelvic floor disorders: Current observations and future projections. *American Journal of Obstetrics & Gynecology* 2001;184(7):1496-1503
2. DeLancey JO. The Hidden Epidemic of Pelvic Floor Dysfunction: achievable goals for improved prevention and treatment. *American Journal of Obstetrics & Gynecology*. 2005;192 (5):1488-95.
3. Morgan DM, DeLancey JO, Guire KE, Fenner DE. Symptoms of Anal Incontinence and Difficult Defecation Among Women with Prolapse and a Matched Control Cohort. *American Journal of Obstetrics and Gynecology*. 2007;197(5): 509.e1-6.
4. Nygaard I, Barber MD, Burgio KL, Kenton K, Meikle S, Schaffer J *et al*. Prevalence of symptomatic pelvic floor disorders in US women. *JAMA*. 2008; 300(11):1311-6.
5. Olsen AL, Smith VJ, Bergstrom JO, Colling JC, Clark AL. Epidemiology of surgically managed pelvic organ prolapse and urinary incontinence. *Obstetrics & Gynecology*. 1997;89(4): 501-6.
6. D'Amour D, Ferrada-Videla M, San Martin Rodriguez L, Beaulieu MD. The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. *Journal of Interprofessional Care*. 2005;19(suppl1)116-31
7. Arksey H, O'Malley L. Scoping Studies: Towards a Methodological Framework. *International Journal of Social Research Methodology: Theory & Practice* 2005;8(1):32-36.
8. CRD. Systematic Reviews: CRD's Guidance for undertaking reviews in healthcare. Centre for Reviews and Dissemination. 3rd edition University of York. 1-294. Jan 2009.
9. Albers-Heitner P, Berghmans B, Joore M, Lagro-Janssen T, Severens J, Nieman F *et al*. The effects of involving a nurse practitioner in primary care for adult patients with urinary incontinence: the PromoCon study (Promoting Continence). *BMC Health Services Research*. 2008; 8(84):1-10.
10. Davis K, Kumar D. Pelvic Floor Dysfunction: a conceptual framework for collaborative patient-centred care. *Journal of Advanced Nursing*. 2003; 43(6):555-68.
11. Davis K, Kumar D, Stanton SL. Pelvic Floor Dysfunction: The need for a multidisciplinary approach. *Journal of Pelvic Medicine and Surgery* 2003; 9(1):23-36
12. Du Moulin MF, Hamers JP, Paulus A, Berendsen C, Halfens R. The role of the nurse in community continence care: a systematic review. *International Journal of Nursing Studies*. 2005; 42(4):479-92.
13. Du Moulin MF, Hamers JP, Paulus A, Berendsen CL, Halfens R. Effects of introducing a specialized nurse in the care of community-dwelling women suffering

- 1
2
3 from urinary incontinence: a randomized controlled trial. *Journal of Wound, Ostomy, & Continence Nursing* 2007; 34(6):631-40.
- 4
5
6
7 14. Gurland, B, Dasilva, M, Levy, G, and Ambereen, S. Challenges in Developing a
8 Multidisciplinary Pelvic Floor Centre. *Journal of Pelvic Medicine and Surgery*
9 2006;12(2), 109-110.(Abstract).
- 10
11 15. Hagen S, Stark D, Cattermole D. A United Kingdom-wide survey of physiotherapy
12 practice in the treatment of pelvic organ prolapse. *Physiotherapy*. 2004; 90(1):19-26
13
- 14 16. Jha S, Moran P, Blackwell A, Greenham H. Integrated care pathways: the way
15 forward for continence services? *European Journal of Obstetrics, Gynecology, &*
16 *Reproductive Biology*. 2007;134(1):120-5.
17
- 18 17. Kapoor DS, Sultan AH, Thakar R, Abulafi MA, Swift RI, Ness W. Management of
19 complex pelvic floor disorders in a multidisciplinary pelvic floor clinic. *Colorectal*
20 *Disease*. 2008;10(2):118-23
21
- 22 18. Milne J, Moore K. An exploratory study of continence care services worldwide.
23 *International Journal of Nursing Studies*. 2003; 40(3);235-247.
24
- 25 19. Mirnezami A, Pilkington S, Monga A, Nugent K P. Multidisciplinary team meetings for
26 pelvic floor disorders. *Colorectal Disease* 2008;10(4); 407-13.
27
- 28 20. Monz B, Hampel C, Porkess S, Wagg A, Pons ME, Samsioe G *et al*. A description of
29 health care provision and access to treatment for women with urinary incontinence in
30 Europe - a five-country comparison. *Maturitas*. 2005; 52 (Suppl 2);S3-12.
31
- 32 21. Moore KH, O'Sullivan RJ, Simons A, Prashar S, Anderson P, Louey M. Randomised
33 controlled trial of nurse continence advisor therapy compared with standard
34 urogynaecology regimen for conservative incontinence treatment: efficacy, costs and
35 two year follow up. *BJOG: An International Journal of Obstetrics & Gynaecology*.
36 2003;110(7):649-57.
37
- 38 22. Nager CW, Kumar D, Kahn MA, Stanton SL. Management of pelvic floor dysfunction.
39 *Lancet*. 1997;350(9093);1751-3.
40
- 41 23. Potter J, Peel P, Mian S, Lowe D, Irwin P, Pearson M *et al*. National audit of
42 continence care for older people: management of faecal incontinence. *Age & Ageing*.
43 2007;36(3):268-73
44
- 45 24. Splete Heidi. Combined Approach Helps Ease Pelvic Floor Dysfunction. Elsevier.
46 *Obstetric Gynecology News* 2005; 40(5), 24-25.
47
- 48 25. Thomas S. Improving continence services: a case study in policy influence. *Journal of*
49 *Nursing Management* 2004;12(4):252-7.
50
- 51 26. Wagg A, Lowe D, Peel P, Potter J. Continence care for older people in England and
52 Wales: data from a national audit. *Journal of WOCN* 2008; 35(2): 215-20
53
- 54 27. Wagg A, Potter J, Peel P, Irwin P, Lowe D, Pearson M. National audit of continence
55 care for older people: management of urinary incontinence. *Age & Ageing*. 2008;
56 37(1):39-44
57
58
59
60

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
28. Wagg A, Gupta RD, Assassa P, Shaw C, Mayne C, Martin M. Secondary-care treatment patterns in the UK for women with urinary incontinence. *BJU International* 2005;96(6):839-42.
 29. Wells M, Wagg A. Integrated continence services and the female Bangladeshi population. *British Journal of Nursing*. 2007;16(9):516-9.
 30. Williams KS, Assassa RP, Cooper NJ, Turner DA, Shaw C, Abrams KR *et al*. Clinical and cost-effectiveness of a new nurse-led continence service: a randomised controlled trial. *British Journal of General Practice*. 2005;55(518):696-703
 31. Bean-Mayberry B, Yano EM, Bayliss N, Navratil J, Weisman CS, Scholle SH. Federally funded comprehensive women's health centers: leading innovation in women's healthcare delivery. *Journal of Women's Health*. 2007;16(9):1281-90 NICE.
 32. Department for Health and Ageing. Developing a Women's Health Policy for Australia-Setting the Scene. Commonwealth of Australia. Australia 1-12. 2008. <http://www.health.gov.au/internet/main/Publishing.nsf/Content/phd-women-policy>NICE.
 33. CG40 Urinary incontinence: The management of urinary incontinence in women . National Collaborating Centre for Women's and Children's Health. National Institute for Clinical Guidance London, UK. 1-36. 2006. <http://www.nice.org.uk/nicemedia/pdf/CG40NICEguideline.pdf>
 34. CG49 Faecal incontinence: the management of faecal incontinence in adults. National Collaborating Centre for Acute Care. National Institute for Clinical Guidance London, UK. 1-36. 2007. <http://www.nice.org.uk/nicemedia/pdf/CG49NICEGuidance.pdf>
 35. DH. 18 week Commissioning Pathways - Female incontinence, prolapse . Department of Health. The Stationery Office (TSO). London. 2008. <http://www.18weeks.nhs.uk/Content.aspx?path=/achieve-and-sustain/Specialty-focussed-areas/Gynaecology/female-incontinence/>
 36. Goodman RM, Seaver MR, Yoo S, Dibble S, Shada R, Sherman B *et al*. A qualitative evaluation of the National Centers of Excellence in Women's Health Program. *Women's Health Issues*. 2002;12(6):291-308.
 37. Ross,S Magali,R. Evaluation of the Pelvic Floor Clinic. University of Calgary Department of Family Medicine, Calgary Canada. Current project. last accessed 23/03/2010 http://www.ucalgary.ca/familymedicine/research/current_projects/pelvic_floor
 38. G. Willy Davila Concept of the Pelvic Floor as a Unit in. *Pelvic Floor Dysfunction: A Multidisciplinary Approach* Eds G. Willy Davila, Gamal M. Ghoniem and Steven D. Wexner 4th edition 2006: p3-6
 39. DH. The NHS Plan; A plan for investment, a plan for reform. Department of Health. The Stationery Office (TSO). London. July 2000. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyandGuidance/DH_4002960
 40. DH. High quality care for all: NHS Next Stage Review final report Department of Health. The Stationery Office (TSO). London. 2008. http://www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/DH_085825

- 1
2
3 41. DH. 18 week Commissioning Pathways - Female incontinence, prolapse .
4 Department of Health. The Stationery Office (TSO). London. 2008.
5 [http://www.18weeks.nhs.uk/Content.aspx?path=/achieve-and-sustain/Specialty-focussed-](http://www.18weeks.nhs.uk/Content.aspx?path=/achieve-and-sustain/Specialty-focussed-areas/Gynaecology/female-incontinence/)
6 [areas/Gynaecology/female-incontinence/](http://www.18weeks.nhs.uk/Content.aspx?path=/achieve-and-sustain/Specialty-focussed-areas/Gynaecology/female-incontinence/)
7
8
- 9
10 42. Albers-Heitner,P.; Berghmans,B.; Nieman,F.; Lagro-Janssen,T.; Winkens,R.
11 Adherence to professional guidelines for patients with urinary incontinence by general
12 practitioners: a cross-sectional study *Journal of Evaluation in Clinical Practice*. 2008;
13 14(5):807-11,
14
- 15 43. DH. Set 4: Specialised Services for Women's Health -1.3 The assessment and
16 treatment of complex urinary and faecal incontinence and genital prolapse in women
17 The Stationary Office. Department of Health. London. 2009,.
18 [http://www.dh.gov.uk/en/Managingyourorganisation/Commissioning/Commissioningspeciali-](http://www.dh.gov.uk/en/Managingyourorganisation/Commissioning/Commissioningspecialisedservices/Specialisedservicesdefinition/DH_4001828)
19 [sedservices/Specialisedservicesdefinition/DH_4001828](http://www.dh.gov.uk/en/Managingyourorganisation/Commissioning/Commissioningspecialisedservices/Specialisedservicesdefinition/DH_4001828)
20
- 21 44. MacKay C, Veinot P, Badley EM. Characteristics of evolving models of care for
22 arthritis: a key informant study. *BMC Health Services Research*. 2008; 8:147
23
- 24 45. Teunissen D, van den BW, van Weel C, Lagro-Janssen T. Urinary incontinence in the
25 elderly: attitudes and experiences of general practitioners. A focus group study.
26 *Scandinavian Journal of Primary Health Care*. 2006;24(1):56-61
27
- 28 46. NICE. CG55 Intapartum Care: management and delivery of care to women in labour
29 National Collaborating Centre for Women's and Children's Health. National Institute
30 for Clinical Guidance London, UK. 1-65. 2007.
31 <http://guidance.nice.org.uk/CG55/NiceGuidance/pdf/English>
32
- 33 47. NICE. Interventional Procedures for Urogenital, Gynaecology, Pregnancy and Birth.
34 International procedures program. National Institute for Clinical Guidance London,
35 UK. 2004 -2009 <http://www.nice.org.uk/ipsearch/index.jsp?action=ipsearch>
36
- 37 48. SIGN No.79 UI Management of Urinary Incontinence in Primary Care: A national
38 clinical guideline. Scottish Intercollegiate Guidelines Network. Glasgow, Scotland
39 2004. <http://www.sign.ac.uk/pdf/qrg79.pdf>
40
- 41 49. Laycock J, Standley A, Crothers E, Naylor F, Frank M, Garside S, Kiely E, Knight S,
42 Pearson A. Clinical Guidelines for the Physiotherapy Management of Females aged
43 16-65 with Stress Urinary Incontinence. Chartered Society of Physiotherapy, London
44 2001.
45
- 46 50. Chatoor,D; Soligo M; Emmanuel A. Organizing a Clinical Service for Patients with
47 Pelvic Floor Disorders. *Best Practice and Clinical Gastroenterology*. 2009;23; 611-
48 620.
49
- 50 51. DH. Good Practice For Continence Services. The Stationary Office. Department of
51 Health. London. 2000
52 [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGui-](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4005851)
53 [dance/DH_4005851](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4005851)
54
- 55 52. DH. National Service Framework for Older people: Modern Standards and Service
56 Models. The Stationary Office. Department of Health. London. 1-194. 2001.
57
58
59
60

- 1
- 2
- 3
- 4 53. DH. National Service Framework for Children, Young People and Maternity Services.
- 5 The Stationary Office. Department of Health London, 2007.
- 6
- 7 54. Haylen,BT; de Ridder,D; Freeman,RM; Swift,SE; Berghmans,B; Lee,J; Monga,A;
- 8 Petri,E; Rizk,DE; Sand,PK; Schaer,GN An International Urogynaecological
- 9 Association(IUGA)/International Continence Society(ICS) Joint Report on the
- 10 Terminology for Female pelvic Floor Dysfunction. *Neurology and Urodynamics* 2010;
- 11 29: 4-20
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51
- 52
- 53
- 54
- 55
- 56
- 57
- 58
- 59
- 60

For Peer Review Only

Tables IJCP 2010

Table 1

Summary of key documentation & evidence based practice guidelines identified to support best practice in the assesement and management of PFD

Author	Documentation	Content
DH NHS National Institute of Clinical Excellence (NICE)	Commissioning guidances CG40 UI (2006) ^[33]	<ul style="list-style-type: none"> Urinary continence service for the conservative management of urinary incontinence in women; Commissioning a urinary continence service; Specifying a urinary continence service; Determining local service levels for a urinary continence service for the conservative management of urinary incontinence in women The Management of Urinary Incontinence in Women
NICE	Commissioning guidances CG49 FI (June 2007) ^[34]	<ul style="list-style-type: none"> Faecal continence service for the management of faecal incontinence in adults; Commissioning a faecal continence service for the management of faecal incontinence in adults; and Help using the faecal service commissioning tool The Management of Faecal Incontinence in Adults
NICE	CG55 (Sept 2007) ^[46]	Intrapartum Care: management and delivery of care to women in labour
NICE	Interventional Procedures Guidances (IPG) (2004-2009) ^[47]	Various relating to a range of pelvic floor related procedures such as insertion of slings, mesh, bulking agents or nerve stimulation devices for prolapse or incontinence.
Department of Health	DH (2000-2001) ^[51,52,53]	Good Practice For Continence Services NSF for Older People NSF for Children, Young People and Maternity Services
Scottish Intercollegiate Guidelines Network (SIGN)	SIGN No.79 UI (Dec 2004) ^[48]	Management of Urinary Incontinence in Primary Care: A national clinical guideline.
Chartered Society of Physiotherapists (CSP) & Association of Chartered Physiotherapists in Women's Health (ACPWH)	Professional body Clinical guidelines(2001) ^[49] Audit and information	CSP Clinical Guidelines For The Physiotherapy Management Of Females Aged 16-65 With Stress Urinary Incontinence CSP SUI audit pack and urinary incontinence assessment ACPWH Pelvic Floor And Vaginal Assessment-Guidance For Post-Graduate Physiotherapists and Physiotherapy Tutors
UK Royal College of Obstetricians and Gynaecologists(RCOG)	Green- top Guidelines No. 29 (2002) No. 35 (2007)	The Management of Third- And Fourth-Degree Perineal Tears Surgical Treatment of Urodynamic Stress Incontinence
Royal College of Physicians, London	Healthcare Commission Audit reports (1995, 1998, 2005-2006) ^[26,27]	Incontinence: causes, management and provision of services Promoting continence. Clinical audit scheme for the management of urinary and faecal incontinence National Audit Of Continence Care In Older People
International Continence Society(ICS)	Membership publications (1995-2009)	Eg. ICI 3rd International Consultation on Incontinence, Part I Basics and Evaluation Part II Management (2005)
The Bladder and Bowel Foundation (B& Bf) formerly The Continence Foundation (CF) <i>UK's largest advocacy charity</i>	Project reports and information (1995-2000)	<ul style="list-style-type: none"> Commissioning Comprehensive Continence Services: Guidelines for Purchasers Inter-Professional Collaboration in Continence Care Nurses and Physiotherapists working in Continence Care. Towards a Service of the Highest Quality: evidence to the NHS review of continence services A Code of Good Practice for Employers Making the Case for Investment in an Integrated Continence Service Incontinence - a challenge and an opportunity for Primary Care
Pelvic floor symptom algorithms	Clinical based algorithms ^[50]	Overviews for FI, Constipation, Obstetric trauma follow-up and, pelvic organ prolapse
International Urogynaecological Association and ICS	Joint report on the Terminology for female PFD ^[54]	A consensus based terminology report comprising over 250 definitions to aid diagnosis and assessment of female PFD

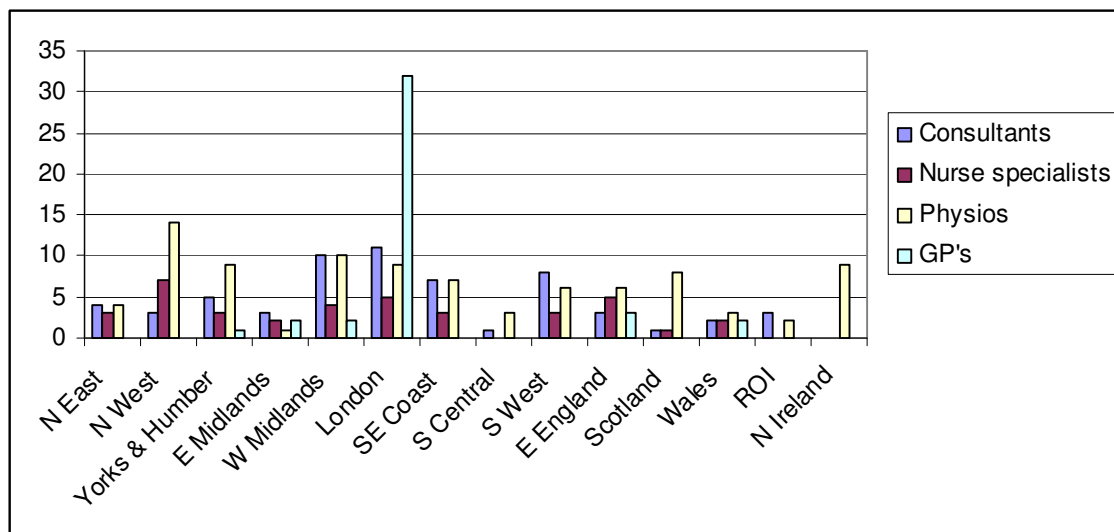
Tables IJCP 2010

Table 2**Summary of practitioners by principle specialty across the four disciplines**

Specialty	TOTAL n (%)	Specialty	TOTAL n (%)
<i>1. Consultants</i>		<i>2. Specialist Nurses</i>	
a) Urogynaecology & Gynaecology	17 (27)	a) Urogynaecology	5 (12.5)
b) Obstetric & Gynaecology	5 (7.9)	b) Obstetrics	1 (2.5)
c) Colorectal	26 (41.3)	c) Colorectal	6 (15.0)
d) Urology	14 (22.2)	d) Urology	1 (2.5)
e) unspecified	1 (1.6)	e) Continence	23 (57.5)
	<i>Total =63</i>	f) Primary care Nurse Practitioners	4 (10.0)
			<i>Total=40</i>
<i>3. Physiotherapists</i>		<i>General Practitioners</i>	
a) Women's health (O & G including Urogynaecology)	31 (32.6)	GP's from one PCT	19 (42.2)
b) Women's health and continence	29 (30.5)	Other GP's	26 (57.8)
c) Continence	14 (14.7)		
d) Women's health and general physio	12 (12.6)		<i>Total = 45</i>
e) Mixed- clinical provision across subspecialty eg. urology, general surgery and medicine	6 (6.4)		
f) unspecified	3(3.2%)		
	<i>Total = 95</i>		

Figures IJCP 2010

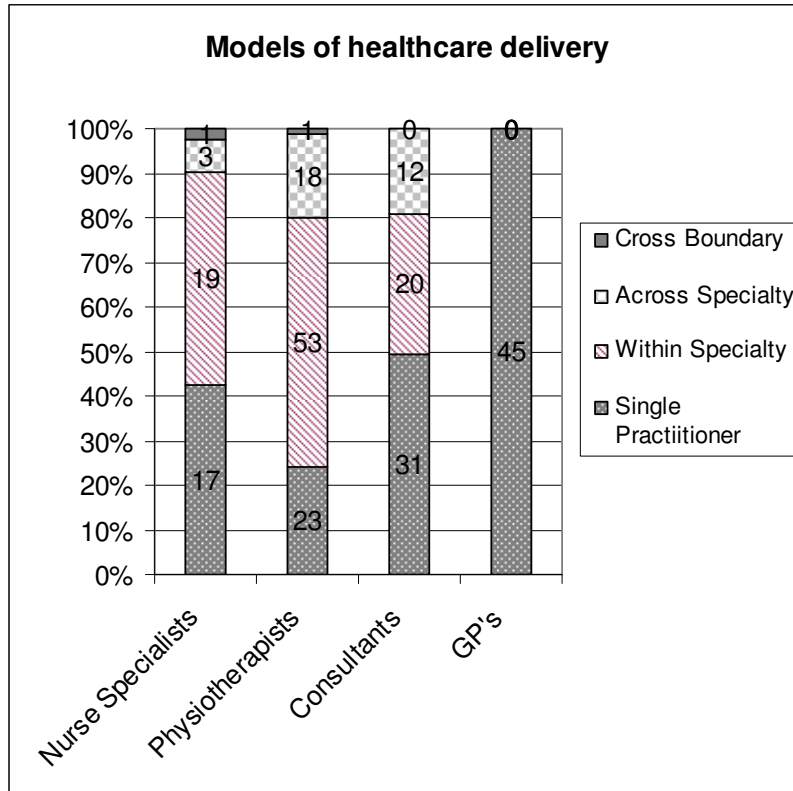
Figure 1
Respondents by Geographical Location



Figures IJCP 2010

Figure 2

Models of healthcare delivery



Pre-view Only

Figures IJCP 2010

Figure 3

Current service pathways for investigation & management of PFD

