Enhancing Pelvic Health: Optimizing the Services Provided by Primary Health Care Teams in Ontario by Integrating Physiotherapists

Sinéad Dufour, PhD, PT;^{*,†‡} Amy Hondronicols, PhD, PT;^{*,§} Kathryn Flanigan, MN, NP[†]

ABSTRACT

Purpose: The purpose of this review was threefold: (1) to outline the current landscape of service provision for two common pelvic floor disorders, urinary incontinence (UI) and pelvic organ prolapse (POP); (2) to describe common pelvic floor dysfunctions (UI and POP) and the associated evidence-based, conservative care; and (3) to present the potential to integrate physiotherapists into inter-professional primary health care teams to optimize the provision of care for these disorders. **Method:** A literature review was undertaken and a case study was developed to describe evidence-informed conservative care for pelvic floor dysfunctions. **Results:** A variety of models exist to treat pelvic floor disorders. Physiotherapists and nurses are key care providers, and their scope and care provision overlaps. In Ontario specifically, both nurses and physiotherapists with additional postgraduate training in pelvic floor disorders are integrated into primary health care, but only to a very limited degree, and they are arguably well positioned to leverage their skills in their respective scopes of practice to optimize the provision of pelvic health care. **Conclusions:** Physiotherapists and nurses are shown to be key providers of effective, conservative care to promote pelvic health. There is an opportunity to integrate these types of provider into primary care organizations in Ontario; this collaborative care could translate into improved outcomes for patients and the health care system at large.

Key Words: inter-professional care; pelvic floor dysfunction; pelvic organ prolapse; primary health care; urinary incontinence.

RÉSUMÉ

Objectif : la présente analyse avait trois objectifs : 1) présenter le paysage actuel des services pour deux troubles courants du plancher pelvien, soit l'incontinence urinaire (IU) et le prolapsus pelvien (PP); 2) décrire des dysfonctions pelviennes courantes (IU et PP) et les soins conservateurs fondés sur des données probantes qui s'y associent et 3) démontrer le potentiel d'intégrer les physiothérapeutes à l'équipe interprofessionnelle de soins de première ligne afin d'optimiser la prestation des soins pour ces troubles. **Méthodologie :** les chercheurs ont procédé à une analyse bibliographique et à une étude de cas pour décrire les soins conservateurs des dysfonctions pelviennes, prodigués en fonction de données probantes. **Résultats :** il y a divers modèles de traitement des troubles pelviens. Les physiothérapeutes et les infirmières sont les dispensateurs de soins clés; la portée et la prestation de leurs soins se recoupent. En Ontario tout particulièrement, les infirmières et les physiothérapeutes qui ont une formation avancée sur les troubles pelviens sont intégrés à l'équipe soignante de première ligne, mais seulement à un degré très limité, même si on peut avancer qu'ils sont bien placés pour faire valoir leurs compétences dans leurs portées respectives et optimiser la prestation des soins pelviens. **Conclusion :** il est démontré que les physiothérapeutes et les infirmières sont des dispensateurs clés de soins conservateurs pour la promotion de la santé pelvienne. Il est possible de les intégrer aux organisations de soins de première ligne en Ontario. Ces soins coopératifs pourraient améliorer les résultats cliniques des patients et de l'ensemble du système de santé.

Despite a high prevalence of pelvic floor dysfunctions and the availability of clinical practice guidelines for effective conservative care, we believe that these conditions are not managed well at the primary health care level in Ontario. This perspective is corroborated by the international literature.^{1,2} Given that primary care providers – namely, doctors, nurses, and physiotherapists – can provide effective conservative management for many pelvic floor disorders,^{3–6} organizations with such team members are potentially well positioned to improve how they pro-

vide conservative pelvic health care. The purpose of this paper is threefold: (1) to describe the current landscape of providing care for two common pelvic floor disorders, urinary incontinence (UI) and pelvic organ prolapse (POP); (2) to outline common pelvic floor dysfunctions (UI and POP) and the associated evidence-based, conservative care; and (3) to present the potential to integrate physiotherapists into inter-professional primary health care teams to optimize how care for common pelvic floor disorders is provided.

From the: ^{*}School of Rehabilitation Science; [†]Faculty of Health Sciences, Department of Family Medicine, McMaster University; [§]Hamilton Family Health Team, Hamilton, Ont.; [‡]The World of My Baby, Milton, Ont.

Correspondence to: Sinéad Dufour, School of Rehabilitation Science, McMaster University, 1400 Main St. W, IAHS Rm. 403, Hamilton, ON L8S 1C7; sdufour@mcmaster.ca.

Contributors: All authors designed the study; or collected, analyzed, or interpreted the data; and drafted or critically revised the article and approved the final draft.

Competing Interests: None declared.

Physiotherapy Canada 2019; 71(2);168–175; doi:10.3138/ptc.2017-81.pc

METHODS

To determine the current landscape of service provision for common pelvic floor disorders, we undertook a literature review. Specifically, three databases were searched (MEDLINE, PubMed, and Google Scholar), and four separate searches were performed in each one: (1) urinary incontinence AND conservative AND primary care, (2) pelvic organ prolapse AND conservative AND primary care, (3) urinary incontinence AND conservative AND access, (4) pelvic organ prolapse AND conservative AND access. Literature that reflected a conservative care approach at the primary care level was identified – in particular, a rigorous literature review exploring the provision of continence care service from an international perspective, including Canada.⁷ Recent clinical practice guidelines and systematic reviews were used to establish a basis for best practices in treating UI and POP, and a case study was developed to describe how this evidence can be applied to a specific situation.

DISCUSSION

Pelvic floor dysfunction

The pelvic floor is located at the caudal aspect of the abdomen; it is composed of the coccygeus muscle and the levator ani (pubococcygeus, puborectalis, and iliococcygeus) muscles. It, along with ligaments and other connective tissue, supports the pelvic organs (uterus, prostate, bladder, vagina, seminal vesicles, small bowel, and rectum). Although pelvic floor dysfunction affects individuals across the lifespan, its prevalence is highest among adults with female internal sex organs. One of the largest risk factors for pelvic floor dysfunction is the process of childbirth. Vaginal birth causes trauma to the pelvic floor,^{7,8} and additional complications from the use of forceps are also common.⁹ Menopause is a risk factor for pelvic floor dysfunction because of the drop in estrogen, and other contributing factors include obesity and chronic coughing.¹⁰ Also, many children experience bladder and bowel dysfunction, which accounts for as much as 40% of consultations with paediatric urologists.¹¹

Of pelvic floor disorders, UI and POP are the most prevalent. Both, however, are underreported because many medical professionals believe that the signs and symptoms of dysfunction are a normal part of ageing, especially after childbirth.¹² These conditions contribute to social isolation, reduced mobility, a higher risk of falls, and reduced quality of life.¹³ Among women with POP with similar objective measurements, those who are symptomatic have more depressive symptoms, distress, and a poorer quality of life.¹⁴

With such sequelae of pelvic floor dysfunction, there is a concomitant increase in using the health care system to manage such symptoms medically and surgically. Consequently, identifying and managing pelvic floor dysfunction

in primary health care may prevent its progression and may mitigate other health care problems and associated costs.

Urinary incontinence

UI denotes the involuntary leakage of urine; there are three common subtypes – stress, urge, and mixed – for which conservative management is the recommended treatment.⁶ Stress UI, which accounts for 50% of incontinence cases in Canada, involves the leakage of urine when intra-abdominal pressure increases, such as during physical exertion, sneezing, or coughing.⁴ The primary mechanism of stress UI relates to suboptimal contractile properties of pelvic floor muscles, which most often exhibit weakness, excessive tension, or impaired coordination.^{15,16}

Urge UI involves urinary leakage immediately preceded by, or associated with, a sudden urge to void, and it represents 14% of reported UI. Symptoms of urgency and frequency usually occur from involuntary contractions of the bladder muscle (detrusor muscle) at the wrong time,¹⁷ and urge UI ultimately results from long-standing overactivity in the detrusor muscle. Behaviours such as frequent, unnecessary voiding to compensate for a poorly functioning pelvic floor can establish an overactive bladder, which often leads to urge UI.^{9,18} Mixed UI is a combination of stress and urge UI, and it accounts for a third of reported cases of UI.⁴

The prevalence of UI in men increases with age – from 15.5% among those aged 55–64 years to 24% among those aged 65–74 years and 30% in those aged 75 years and older.¹⁹ Moreover, UI in particular results in a high economic burden because it is a factor for admitting many older adults to long-term care facilities.¹³ In addition, the Cameron Institute estimates a personal financial burden of \$1,400–\$2,100 per year for incontinence.¹⁷

Pelvic organ prolapse

POP is defined as a downward movement of the pelvic organs, which can result in herniation into or through the vagina (uterovaginal prolapse) or anal canal (rectal intussusception and rectal prolapse).^{20,21} An anterior prolapse consists of bladder prolapse (cystocele) and uterine prolapse or vaginal apex (vaginal vault after hysterectomy). A posterior prolapse includes the rectal ampulla dropping into the vagina (rectocele) and may include part of the sigmoid colon herniating into the vagina.²¹ Prolapse is considered to be a neuromuscular condition resulting from trauma from vaginal childbirth and, to a lesser extent, obesity.^{22,23} Over time, weakness and poor neuromuscular control through the thorax and pelvis result in a lack of caudal support for the pelvic organs and strain to connective tissues, which provide cranial support.²⁰ Ultimately, when support from the uterosacral ligaments, vaginal walls, endopelvic fascia, and perineal membrane fail, prolapse occurs.²⁰

Assessment of pelvic floor dysfunction

An assessment of pelvic floor dysfunction consists of initial investigations, a subjective interview, and an internal physical examination. In one possible model for a primary health care setting in Ontario, a nurse practitioner (NP) with additional training in pelvic floor muscle assessment would carry out a comprehensive examination and communicate the results to a physiotherapist, who would assume responsibility for aspects of evidence-based, conservative care.

A detailed history (subjective examination) consists of questions about voiding frequency, post-voiding issues,⁴ fluid intake habits, pelvic girdle pain, obstetrics history, urogynaecological history, and other sensory information. Reports of urine leaking during exercise, laughing, or coughing may indicate stress UI, whereas sudden urgency with or without specific triggers may point to urge UI. Validated patient questionnaires can assess the severity and impact of UI on quality of life, such as the Urogenital Distress Inventory and the Incontinence Impact Questionnaire, Short Form (IIQ-7).²⁴ When POP is symptomatic, patients may report a vaginal bulge or protrusion, vaginal laxity, heaviness or a dragging sensation, dyspareunia (difficult or painful intercourse), hesitancy or change in urinary stream resulting from compression of the urethra, feelings of incomplete defecation or manual removal of stool resulting from herniation of the bowel, recurrent urinary tract infections, and nighttime voiding (nocturia).²⁰

Initially, a urinalysis to rule out a bladder infection is important,⁴ but a bladder diary that covers 24 hours²⁵ or 3–7 days^{3,4,25} elicits valuable information about frequency, leakage, timing of voids, fluid intake, and bowel movements.^{19,26} Although rarely used in primary care set-

tings,²⁰ a bladder diary can function as a springboard for modifying voiding behaviours, changing habits,³ and tracking changes.

The physical examination includes a pelvic examination to evaluate properties of the pelvic floor and pelvic organs.²⁰ A digital examination assesses pelvic muscle function and typically includes a measure of strength and coordination. The strength (power) of a muscle contraction is graded from 0 to 5 on the modified Oxford scale, whereas muscle coordination is assessed by how and when the pelvic floor contracts in response to a voluntary cough.^{20,27,28} The assessor can provide feedback on the quality of the muscle contraction to ensure that the patient correctly carries out exercises for therapeutic purposes. Muscles are also palpated for presence of tenderness and degree of muscle tone.^{29,30}

To assess for POP, the individual assumes a crook-lying position, with the trunk flexed, while propped up on the forearms. The individual is then prompted by the assessor to perform a Valsalva maneuver (hold the breath and bear down) so that the downward mobility of the pelvic viscera can be assessed. To determine whether a posterior prolapse is present, the assessor performs a rectal examination.³¹ These examination techniques are described in Table 1. The Pelvic Organ Prolapse Quantification (POP-Q) is the gold standard for staging prolapse, and the simplified version has near-perfect correlation with the POP-Q.³² The external physical assessment may include examining postural observation, external palpation, core strength and muscle recruitment, and muscle length.

Management of pelvic floor dysfunction

As we have indicated, evidence-based clinical practice guidelines have been developed to facilitate the delivery

Table 1 Pelvic Examination Procedures for Urinary Incontinence and Pelvic Organ Prolapse³¹

Procedure	Description	Indicator of musculoskeletal dysfunction	Interrater reliability*
PERFECT manual muscle testing†	P = power; positive test : <4 out of 5	Pelvic floor muscle weakness	0.48–0.77
	E = endurance: time (s) that a maximum contraction can be sustained; positive test : <10 s	Decreased muscular endurance	0.17–0.56
	R = repetition: no. of maximum voluntary contractions; positive test : <10 repetitions	Decreased muscular endurance	0.48–0.77
	F = fast contractions: no. of fast (1-s) maximum contractions; positive test : <10 repetitions	Decreased motor control	0.29–0.65
	ECT = timing: sustained voluntary contraction with a cough; positive test: no contraction before cough ²⁶	Pelvic floor muscle discoordination	0.14–0.53
Pelvic floor muscle tenderness	Firm digital vaginal or anal palpation; positive test : pain ^{28,29}	Muscular tenderness, myofascial pain, or both	0.76–0.91
Identifying pelvic organ prolapse	Observing pelvic floor while patient performs Valsalva maneuver in supine; positive test : visualization of descent of posterior or anterior vaginal wall; uterine, bladder, or rectal descent ³⁰	Weakened connective tissues of pelvic organs	0.61–0.87

*Reported as κ.

†Uses the modified Oxford grading scale : 0 = no contraction; 1 = flicker; 2 = weak squeeze, no lift; 3 = fair squeeze, definite lift; 4 = good squeeze with lift; 5 = strong squeeze with lift.

of effective conservative care options for both UI and POP,^{6,32} using approaches with high and very high degrees of efficacy. Managing UI differs depending on an individual's signs and symptoms and the impact on the individual's quality of life. For stress incontinence, pelvic floor muscle training can help build strength and voluntary control. Modifying behaviour to alleviate stress UI includes avoiding bearing down during bowel movements and increasing one's physical activity. Losing weight may also reduce the severity of stress UI symptoms.

Individuals may be able to effectively manage urge incontinence by modifying their behaviour to address triggers and maladaptive voiding patterns. For example, defensive voiding (urinating "just in case") can lead to the dysregulation of bladder reflexes and, subsequently, overactive bladder syndrome.^{16,18} Education and counselling techniques to assist in countering such habits and feelings of urgency reduces the impact of urge UI. Interventions to reduce tone in the pelvic floor muscles include manual release, trigger point therapy (internal strategies), diaphragmatic breathing, muscle energy inhibition strategies, and stress reduction (external strategies).

When the pelvic floor muscles are tight, engaging in training to strengthen the muscles – without paying attention to first correcting the resting tone – is likely a misguided approach.¹⁶ Pelvic floor muscle training is a multifaceted approach that moves beyond conventional "stability" or "core" training because it supports reducing muscle tone through inhibition pathways, and improved strength may be indicated after tone is addressed. Thus, it is important that clinicians have skills in assessing and managing presentations along the broad continuum of pelvic floor dysfunction.

Enacting conservative care for POP includes lifestyle counselling such as weight loss and avoidance of heavy lifting, providing education to lessen and prevent constipation, and providing pelvic floor muscle training.³² A randomized controlled trial showed that one-on-one training of the pelvic floor muscles improved endurance, strength, and coordination of the levator ani muscles, which in turn increased structural support for the pelvic floor.³³ A subsequent non-surgical option is the insertion of a vaginal pessary; a ring shape has been used successfully in more than 80% of women.³⁴

Pelvic floor muscle training is important for people with UI and POP alike, and it consists of more than conventional Kegel exercises; key elements are education about the function of the pelvic floor muscles, their coordination with the other inner and outer unit muscles, strength training, and building endurance.⁶ Patients learn to activate their muscles first in isolation and then by co-activating the core skeletal muscle groups, a movement that fosters a functional use of the pelvic floor contraction. The key principles of pelvic floor muscle training address multiple fitness parameters of the pelvic

floor muscles (not just strength) and integrate the function of the deep inner unit core muscles in a synergistic and functional manner with the outer unit muscles using a variety of postures and exercises.³⁵

Current status of inter-professional care

Significant, high-quality evidence supports the assessment and conservative management of pelvic floor dysfunction by both nurses and physiotherapists.^{1,2,7} In Canada, nurse continence advisors emerged in the 1990s after receiving training in the postgraduate programme administered by McMaster University.³⁶ However, despite the determined effectiveness of the care provided by nurses and nurse continence advisors, these specialists have not been widely used in Canada.³⁷ Physiotherapists have also been key in delivering care for pelvic floor dysfunctions, but little has been written about the characteristics of their services.⁷ It has been acknowledged that the care provided by nurses and physiotherapists for continence care overlaps, specifically³⁸ because both types of provider engage in collecting a detailed patient history, use bladder diaries, and assess pelvic floor muscle function.

From an international perspective, a variety of inter-professional models have been explored and were described in detail by Milne and Moor.⁷ To date, as far as we are aware, the efficacy of particular models of service provision have yet to be established, although inter-professional models have been advocated.⁷ Moreover, after examining continence service provision in primary care, Shaw and colleagues) concluded that a number of barriers exist to providing first-line continence care.³⁹ Specifically, these authors found that more than 60% of the family physicians who participated in their study had not received any education related to UI in more than 5 years. Moreover, although these participants offered some lifestyle strategies, there was very little evidence that they were provided with any information on pelvic floor muscle training.³⁹ As such, we propose that in primary care, access to and evidence-based conservative management of pelvic floor disorders could be improved by integrating physiotherapists and nurse continence advisors into primary health care teams, thereby leveraging the existing inter-professional collaboration.

Delivering primary health care

Primary health care in Ontario is largely delivered through community health centres, Aboriginal health access centres, family health teams (FHTs), and NP-led clinics (NPLCs). A priority in primary health care is inter-professional care, defined as a comprehensive health service provided by multiple caregivers working collaboratively to deliver quality care.⁴⁰ Inter-professional care increases efficiency, improves patient experience and outcomes, and is sustainable.⁴⁰ These four types of teams have improved inter-professional care as a consequence

of an expanded spectrum of care, which includes different health care providers paying attention to the needs of people with chronic conditions.⁴¹ The FHT initiative commenced in 2005, and there are now 184 FHTs serving 3 million people in Ontario.⁴² In NPLCs, the lead providers are NPs; a physician plays a collaborative role along with a team of other clinicians such as registered nurses, dietitians, physiotherapists, and mental health workers.⁴³ The first NPLC opened in 2007, and as of 2017, 25 NPLCs now operate in Ontario.⁴³

NPs working in primary health care organizations improve how evidence-based care is delivered by promoting health and preventing disease for individuals, families, and communities.⁴⁴ In Canada, NPs have the legislative authority to order and interpret diagnostic tests, perform internal pelvic exams, make and communicate medical diagnoses, and prescribe pharmaceutical agents.⁴⁴ Although NPs already perform internal pelvic exams, these exams typically do not include assessing or treating the pelvic floor and associated tissues. In Ontario, NPs can gain this competency by taking additional postgraduate training,⁴⁵ although, to our knowledge, only a small proportion of NPs have completed this training.

In 2013, the Ministry of Health and Long-Term Care in Ontario announced the integration of physiotherapists into FHTs. In 2015, the first physiotherapists were hired by selected teams to fulfil roles aligned with the greater primary health care mandate and to expand access to physiotherapy for all Ontarians.⁴⁶ The entry-level scope of practice for physiotherapists in Canada includes assessing and managing muscular, neurological, and cardio-pulmonary systems as well as giving a diagnosis.^{47,48} The ability to assess and treat the pelvic floor by internal examination is an additional skill performed by physiotherapists who have completed postgraduate training⁴⁷ and who are rostered with or authorized by the appropriate regulatory body.⁴⁸ According to the list of physiotherapists registered with the College of Physiotherapists of Ontario (as of March 18, 2018), 810 physiotherapists are rostered to perform internal skills, and only 2 of them list employment in a primary health care setting.

Proposed delivery of inter-professional primary care

Given their scopes of practice, the efficacy of conservative management, and their roles in primary health care settings, nurses and physiotherapists have a meaningful opportunity to leverage the collaboration that exists in primary health care teams to enhance the provision of service for pelvic floor dysfunction; this includes improving access to care and delivering evidenced-based care. Optimizing service provision means that at least one of the primary care providers on the team would need to have postgraduate training related to UI and POP.

Because many nurses, NPs, and physiotherapists in FHTs work with populations who have chronic disease, they can identify early those people who are at high risk of pelvic floor dysfunction and translate chronic disease self-management principles into treatment. Having a nurse who specializes in continence care work alongside family physicians can also improve detection rates of pelvic floor dysfunction.²³ In such an environment, one clinician with the appropriate postgraduate training can identify and assess pelvic floor dysfunction while another supports multimodal conservative management and communication within the patient's circle of care.

On the basis of our clinical experience in FHTs (from the NP and physiotherapist perspectives), we have seen the ease with which providers who already do internal pelvic exams can integrate an assessment of the pelvic floor and associated tissues after completing brief postgraduate training. Moreover, we have seen how collaboration with a physiotherapist on the team regarding the pelvic floor assessment findings supports the enactment of evidence-based conservative care – for example, by providing education, counselling on lifestyle issues, and prescribing exercise. A physiotherapist may have more time to devote to these effective therapeutic options than other members of the team, and this care structure would increase the resource and economic efficiency of primary health care.⁴⁹ We propose that such a collaborative model could also enhance access to treatment for patients with pelvic floor dysfunction, especially when cost is a barrier to accessing private pelvic physiotherapy.

CASE STUDY

A case study was developed as an example of how evidence-based practice can be integrated into collaboration in a primary health care team model. It is presented in two parts, highlighting first assessment strategies and then management strategies inclusive of collaboration between the NP and physiotherapist.

Ann is a woman aged 56 years with two children. She is seeing the NP at her FHT because her issues with incontinence have become worse. She is post-menopausal, with a BMI of 35, and has had constipation for 10 years.

Part 1

During her assessment with the NP, Ann says that she controls her incontinence by avoiding fluid intake during the day. She describes episodes of urgently needing to void and occasionally not making it to the toilet in time. She leaks urine when she laughs, coughs, and sneezes. She usually wakes up six times a night to void. Ann has no extended health benefits. She scores 80.9 out of 100 on the IIQ-7, which reveals the significant impact of her incontinence symptoms. On objective examination, her pelvic floor muscles have increased tone and are graded

1 out of 5 on the modified Oxford scale. She has a grade 2 cystocele and rectocele. Ann is diagnosed with mixed UI and POP.

Part 2

Ann is referred to the physiotherapist at the FHT, who suggests a management plan that includes education about the contribution of the pelvic floor muscles to continence and core strength. In the clinic, she learns to relax her pelvic floor with diaphragmatic breathing, relaxation techniques such as a mindfulness-based body scan to reduce stress, and strategies to address urgency in the moment. She is also taught to integrate the correct pelvic floor contraction, which she learned with the NP, with other inner unit core muscle contractions. After 4 weeks of practice at home, Ann reports that she gets up only twice in the night to urinate, and she is now confident that she can control feelings of urgency without incontinence – she has not experienced any urgency in the past week. At follow-up with her NP, Ann's pelvic floor muscle strength is graded 3 out of 5 (on the modified Oxford scale), and her score on the IIQ-7 has improved significantly, to 57.4 out of 100.

CONCLUSION

Pelvic floor disorders are common, and they can be managed effectively by primary care providers using conservative approaches; however, there are barriers to providing service at the primary care level in Ontario and around the world. Currently, a variety of models of service provision for pelvic floor disorders are in use, and the optimal model has yet to be established. We have proposed and explicated, using a case study, how physiotherapy and nursing services can be integrated into a primary health care team to increase inter-professional collaboration and optimize the provision of service for pelvic floor disorders.

Our case study describes how a shared care approach helped Ann receive the care she needed with no additional cost or duplicated examinations. With only a few visits to her NP and physiotherapist, Ann saw improvement in her quality of life. She learned a number of strategies to manage her incontinence, so that she could be proactive and work to maintain her function.

The proposed model of conservative care builds on the growing recognition of the need to manage chronic conditions and to prevent sequelae that affect people's quality of life. Evidence supports the conclusion that primary care providers, specifically physiotherapists and nurses, can play an important role in successfully assessing and managing incontinent patients with pelvic floor dysfunction. The existing structure of primary care teams in Ontario is flexible enough to integrate these types of providers and thereby provide timely, efficient, and expanded access to and enactment of evidence-informed care.

KEY MESSAGES

What is already known on this topic

Evidence supports the conservative care strategies for pelvic floor dysfunctions provided by physiotherapists and primary care providers (family physicians and nurse practitioners).

What this study adds

This study positions the integration of physiotherapists and nurse practitioners into primary health care teams as potentially increasing enactment of evidence-informed conservative care for patients with pelvic floor dysfunction.

REFERENCES

1. Wagg A, Duckett J, McClurg D, Harari D, Lowe D. To what extent are national guidelines for the management of urinary incontinence in women adhered to? Data from a national audit. *BJOG*. 2011;118(13):1592–600. <https://doi.org/10.1111/j.1471-0528.2011.03100.x>. Medline:21895954
2. Albers-Heitner P, Berghmans B, Nieman F, et al. Adherence to professional guidelines for patients with urinary incontinence by general practitioners: a cross-sectional study. *J Eval Clin Pract*. 2008;14(5):807–11. <https://doi.org/10.1111/j.1365-2753.2007.00925.x>. Medline:18462277
3. Wyman JF, Burgio KL, Newman DK. Practical aspects of lifestyle modifications and behavioural interventions in the treatment of overactive bladder and urgency urinary incontinence. *Int J Clin Pract*. 2009;63(8):1177–91. <https://doi.org/10.1111/j.1742-1241.2009.02078.x>. Medline:19575724
4. Bettez M, Tu LM, Carlson K, et al. 2012 update: guidelines for adult urinary incontinence collaborative consensus document for the Canadian Urological Association. *Can Urol Assoc J*. 2012;6(5):354–63. <https://doi.org/10.5489/cuaj.12248>. Medline:23093627
5. Thüroff JW, Abrams P, Andersson KE, et al. EAU guidelines on urinary incontinence. *Eur Urol*. 2011;59(3):387–400. <https://doi.org/10.1016/j.eururo.2010.11.021>. Medline:21130559
6. Dumoulin C, Hay-Smith EJ, Mac Habée-Séguin G. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. *Cochrane Database Syst Rev*. 2014;2014(5):CD005654. <https://doi.org/10.1002/14651858.CD005654.pub2>. Medline:24823491
7. Milne J, Moor K. An exploratory study of continence care services worldwide. *Int J Nurs Studies*. 2003;40(3):235–47. [https://doi.org/10.1016/S0020-7489\(02\)00082-2](https://doi.org/10.1016/S0020-7489(02)00082-2). Medline:12605946
8. Herbert J. Pregnancy and childbirth: the effects on pelvic floor muscles. *Nursing Times*. 2009;105(7):38–41. Medline:19326654
9. Smith LA, Price N, Simonite V, et al. Incidence of and risk factors for perineal trauma: a prospective observational study. *BMC Pregnancy Childb*. 2013;13(59):1–9. <https://doi.org/10.1186/1471-2393-13-59>. Medline:23497085
10. Tegerstedt G, Miedel A, Maehle-Schmidt M, et al. Obstetric risk factors for symptomatic prolapse: a population-based approach. *Am J Obstet Gynecol*. 2006;194(1):75–81. <https://doi.org/10.1016/j.ajog.2005.06.086>. Medline:16389012
11. Dos Santos J, Lopes RI, Koyle MA. Bladder and bowel dysfunction in children: an update on the diagnosis and treatment of a common, but underdiagnosed pediatric problem. *Can Urol Assoc J*. 2017;11(1–2 Suppl 1):S64–S72. <https://doi.org/10.5489/cuaj.4411>. Medline:28265323
12. Schüssler-Fioreza Rose SM, Gangnon RE, Chewning B, et al. Increasing discussion rates of incontinence in primary care: a randomized controlled trial. *J Womens Health*. 2015;24(11):940–9. <https://doi.org/10.1089/jwh.2015.5230>. Medline:26555779

13. Parvaiz M. Improving the care pathway for women with incontinence. *Womens Health*. 2015;11(2):105–8. <https://doi.org/10.2217/WHE.14.83>. Medline:25776284
14. Pizarro-Berdichevsky J, Hitschfeld MJ, Pattillo A, et al. Association between pelvic floor disorder symptoms and QoL scores with depressive symptoms among pelvic organ prolapse patients. *Aust N Z J Obstet Gyn*. 2016;56(4):391–7. <https://doi.org/10.1111/ajo.12467>. Medline:27135639
15. Tulikangas, P. Pathophysiology of incontinence and pelvic floor dysfunction. In: Culligan PJ, Goldberg RP, editors. *Urogynecology in primary care*. London: Springer; 2007. p. 34–9.
16. Rosenblatt PL, Elkadry E. Diagnosing incontinence and pelvic floor problems: an efficient, cost-effective approach for primary care providers. In: Culligan PJ, Goldberg RP, editors. *Urogynecology in primary care*. London: Springer; 2007. p. 40–59.
17. Cameron Institute. The impact of incontinence in Canada: a briefing document for policy-makers [Internet]. Peterborough, ON: Canadian Continence Foundation; c2014 [cited 2018 Jan 9]. Available from: <http://www.canadiancontinence.ca/pdfs/en-impact-of-incontinence-in-canada-2014.pdf>.
18. Khullar V. Patient-reported outcomes and different approaches to urinary parameters in overactive bladder: what should we measure? *Int Urogynecol J*. 2012;23(2):179–92. <http://doi.org/10.1007/s00192-011-1526-9>. Medline:22011932
19. Diokno AC, Estanol MV, Ibrahim IA, et al. Prevalence of urinary incontinence in community dwelling men: a cross sectional nationwide epidemiological survey. *Int Urol Nephrol*. 2007;39(1):129–36. <https://doi.org/10.1007/s11255-006-9127-0>. Medline:17086446
20. Dietz HP. Pelvic organ prolapse: a review. *Aust Fam Physician*. 2015;44(7):446–52. Medline:26590487
21. Handa VL, Harris TA, Ostergard DR. Protecting the pelvic floor: obstetric management to prevent incontinence and pelvic organ prolapse. *Obstet Gynecol*. 1996;88(3):470–8. [https://doi.org/10.1016/0029-7844\(96\)00151-2](https://doi.org/10.1016/0029-7844(96)00151-2). Medline:8752261
22. Rodriguez-Mias NL, Martinez-Franco E, Aguado J, et al. Pelvic organ prolapse and stress urinary incontinence, do they share the same risk factors? *Eur J Obstet Gynecol Reprod Biol*. 2015;190:52–7. <https://doi.org/10.1016/j.ejogrb.2015.04.015>. Medline:25984809
23. Albers-Heitner P, Berghmans B, Joore M, 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 Serv Res*. 2008;8:84. <https://doi.org/10.1186/1472-6963-8-84>. Medline:18412964
24. Uebersax JS, Wyman JF, Shumaker SA, et al. Short forms to assess life quality and symptom distress for urinary incontinence in women: the Incontinence Impact Questionnaire and the Urogenital Distress Inventory. *Neurourol Urodyn*. 1995;14(2):131–9. <https://doi.org/10.1002/nau.1930140206>. Medline:7780440
25. Naoemova I, De Wachter S, Wuyts FL, et al. Reliability of the 24-h sensation-related bladder diary in women with urinary incontinence. *Int Urogynecol J*. 2008;19(7):955–9. <https://doi.org/10.1007/s00192-008-0565-3>. Medline:18235981
26. Rosenberg MT, Newman DK, Tallman CT, et al. Overactive bladder: recognition requires vigilance for symptoms. *Cleve Clin J Med*. 2007;74(Suppl 3):S21–9. Medline:17546830
27. Morrison P. Musculoskeletal conditions related to pelvic floor muscle overactivity. In: Padoa A, Rosenbaum T, editors. *The overactive pelvic floor*. Basel, Switzerland: Springer International; 2016. p. 91–111.
28. Neville CE, Fitzgerald CM, Mallinson T, et al. A preliminary report of musculoskeletal dysfunction in female chronic pelvic pain: a blinded study of examination findings. *J Bodyw Mov Ther*. 2012;16(1):50–6. <https://doi.org/10.1016/j.jbmt.2011.06.002>. Medline:22196427
29. Bo K, Sherburn M. Evaluation of female pelvic-floor muscle function and strength. *Phys Ther*. 2005;85(3):269–82. Medline:15733051.
30. Loving S, Thomsen T, Jaszczal P, et al. Pelvic floor muscle dysfunction are prevalent in pelvic pain: a cross-sectional population-based study. *Eur J Pain*. 2014;18(9):1259–70. <https://doi.org/10.1002/j.1532-2149.2014.485.x>. Medline:24700500
31. Sliker-ten Hove M, Pool-Goudzwaard A, Eijkemans M, et al. Face validity and reliability of the first digital assessment scheme of pelvic floor muscle function conform the new standardized terminology of the international continence society. *Neurourol Urodyn*. 2009;28(4):295–300. <https://doi.org/10.1002/nau.20659>. Medline:19090583
32. Dumoulin C, Hunter KF, Moore K, et al. Conservative management for female urinary incontinence and pelvic organ prolapse review 2013: summary of the 5th International Consultation on Incontinence. *Neurourol Urodyn*. 2016;35(1):15–20. <https://doi.org/10.1002/nau.22677>. Medline:25400065
33. Hagen S, Stark, D, Glazener C, et al. Individualised pelvic floor muscle training in women with pelvic organ prolapse (POPpy): a multicentre randomised controlled trial. *Lancet*. 2014;383(9919):796–806. [https://doi.org/10.1016/S0140-6736\(13\)61977-7](https://doi.org/10.1016/S0140-6736(13)61977-7). Medline:24290404
34. Bordman R, Telner D. Pessary insertion: choosing appropriate patients. *Can Fam Phys*. 2007;53(3):424–5. Medline:17872675.
35. Sapsford R. Rehabilitation of pelvic floor muscles utilizing trunk stabilization. *Man Ther*. 2004;29(9):3–12. [https://doi.org/10.1016/S1356-689X\(03\)00131-0](https://doi.org/10.1016/S1356-689X(03)00131-0). Medline:14723856
36. Skelly J, Kenny K. The impact of the continence nurse advisor on continence care. *Clin Eff Nurs*. 1998;2(1):4–8. [https://doi.org/10.1016/S1361-9004\(98\)80076-9](https://doi.org/10.1016/S1361-9004(98)80076-9).
37. Borrie M, Bawden M, Speechley M, Kloseck, M. Interventions led by nurse continence advisors in the management of urinary incontinence: a randomized controlled trial. *CMAJ*. 2002;166(10):1267–8. Medline:12041843
38. Frahm J. The role of the physical therapist in incontinence: innovation and communication to improve patient care. *Ostomy Wound Manage*. 1998;43(1):47–53. Medline:9087065
39. Shaw C, Atwell C, Wood F, Brittain K, Williams K. A qualitative study of the assessment and management of urinary incontinence in primary care. *Fam Pract*. 2007;24(5):461–7. <https://doi.org/10.1093/fampra/cmm041>. Medline:17670805
40. Interprofessional Care Steering Committee. Interprofessional care: a blueprint for action in Ontario [Internet]. Toronto: Health Force Ontario; 2007 [cited 2018 Mar 28]. Available from: <http://www.ontla.on.ca/library/repository/mon/18000/276214.pdf>.
41. Dufour SP, Brown J, Lucy SD. Integrating physiotherapists within primary health care teams: perspectives of family physicians and nurse practitioners. *J Interprof Care*. 2014;28(5):460–5. <https://doi.org/10.3109/13561820.2014.915210>. Medline:24797363
42. Ministry of Health and Long-Term Care. Family health teams [Internet]. Toronto: The Ministry; c2009–2017 [cited 2017 Oct 23]. Available from: <http://www.health.gov.on.ca/en/pro/programs/fht/>.
43. Association of Ontario Health Centres. Nurse practitioner-led clinics [Internet]. Toronto: The Association; n.d. [cited 2017 Oct 23]. Available from: <https://www.aohc.org/nurse-practitioner-led-clinics>.
44. College of Nurses of Ontario. Nurse practitioner [Internet]. Toronto: College of Nurses of Ontario; 2017 [cited 2017 Oct 23]. Available from: https://www.cno.org/globalassets/docs/prac/41038_strdrnec.pdf.
45. Pelvic Health Solutions. For the professional [Internet]. Ontario: The Company; c2010–2017 [cited 2017 Oct 23]. Available from: <http://pelvichealthsolutions.ca/for-the-professional/>.
46. Ontario Physiotherapy Association. Physiotherapists in primary health care [Internet]. Toronto: The Association; n.d. [cited 2017 Oct 23]. Available from: <https://opa.on.ca/wp-content/uploads/2015/12/Physiotherapists-Primary-Health-Care.pdf>.
47. Canadian Physiotherapy Association. Description of physiotherapy in Canada [Internet]. Ottawa: The Association; 2012 [cited 2017 Oct 23].

Available from: https://physiotherapy.ca/sites/default/files/site_documents/dopen-en.pdf.

48. Physiotherapy Act of 1991. S.O. 1991, c. 37. Consolidation period: from Sept 1 2011 to the e-Laws currency date.
49. Holtzer-Goor KM, Gaultney JG, van Houten P, et al. Cost-effectiveness of including a nurse specialist in the treatment of

urinary incontinence in primary care in the Netherlands. PLoS One. 2015;10(10):e0138225. <https://doi.org/10.1371/journal.pone.0138225>. Medline:26426124