

Managing benign prostatic hyperplasia in primary care

Patient-centred approach

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abstract

PROBLEM ADDRESSED Management of benign prostatic hyperplasia (BPH) is changing from a surgical approach to a medical approach, and the role of primary care physicians is expanding.

OBJECTIVE OF PROGRAM To introduce a patient-centred approach to managing BPH in primary care through a continuing medical education (CME) program.

MAIN COMPONENTS OF PROGRAM A practice-based, small group, peer-led CME program focused on application of the International Prostate Symptom Score and Quality of Life Assessment in four case studies on prostatism, including BPH. At 86 workshops held across Canada, 658 physicians participated in discussions with case materials that included videos and a handbook. A before-after practice behaviour questionnaire was administered at each workshop to evaluate "intent to change."

CONCLUSIONS Participating physicians showed willingness to learn new skills for patient-centred management of BPH. These results suggest that peer-led, small group CME can successfully encourage use of new practice guidelines in primary care and teach physicians practical steps for developing therapeutic alliances with their patients.

résumé

PROBLÈME La prise en charge de l'hyperplasie prostatique bénigne est passée d'une approche chirurgicale à une approche médicale d'où s'ensuit un rôle plus prépondérant des médecins de première ligne.

OBJECTIF DU PROGRAMME Instaurer une approche centrée sur le patient dans la prise en charge de l'hyperplasie prostatique bénigne dans le contexte des soins de première ligne au moyen d'un programme de formation médicale continue (FMC).

PRINCIPALES COMPOSANTES DU PROGRAMME Un programme de FMC, dirigé par des pairs, fondé sur la pratique et dispensé en petit groupe, mettait l'accent sur l'application du barème international des symptômes liés à la prostate et d'évaluation de la qualité de vie dans quatre études de cas de troubles prostatiques, y compris d'hyperplasie bénigne. Dans toutes les régions du Canada, 86 ateliers ont regroupé 658 médecins qui ont participé à des discussions sur les dossiers de cas comportant des vidéos et un manuel. Un questionnaire portant sur le comportement avant et après l'atelier a été administré à chaque rencontre pour évaluer « l'intention de changer ».

CONCLUSIONS Les médecins participants ont manifesté leur réceptivité à l'égard d'acquérir de nouvelles compétences dans la prise en charge centrée sur le patient de l'hyperplasie prostatique bénigne. Ces résultats font valoir que la FMC dirigée par des pairs et dispensée en petit groupe peut se révéler fructueuse pour encourager le recours à de nouveaux guides de pratique dans les soins de première ligne et pour enseigner aux médecins les étapes pratiques dans l'établissement d'alliances thérapeutiques avec leurs patients.

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Cet article a fait l'objet d'une évaluation externe.

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CME

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As Canada's population ages, benign prostatic hyperplasia (BPH) has become one of the most common conditions presenting in primary care.^{1,2} Non-surgical advances in treatment of BPH in the past decade, such as use of α -adrenergic antagonists and 5 α -reductase inhibitors to mediate androgen-dependent growth of the prostate,³ have brought growing recognition that conservative management of BPH is often appropriate. "Watchful waiting" is suitable for patients who are not greatly bothered by their symptoms and have no sign of complications.³ The natural history of BPH is that symptoms improve with time in 15% of patients, remain stable in 30%, and worsen in 55%.⁴

Both watchful waiting and pharmacologic interventions for mild and moderate BPH require a patient-centred approach. Together, physician and patient should monitor changes in symptoms, evaluate the effect of BPH symptoms on the patient's life, weigh treatment options, and follow the progress of interventions.^{5,6} Because men with very large prostates do not always experience outlet obstruction and symptom severity fluctuates over time without changes in prostate size,⁷ a patient-centred approach to assessment is facilitated by use of a standardized BPH-specific symptom and quality-of-life questionnaire, such as the International Prostate Symptom Score and Quality of Life Assessment (I-PSS).⁸

First developed as the American Urological Association Symptom Index and BPH Impact Index when the American Urological Association sought to characterize symptoms' effect on patients' lives,⁸ I-PSS has 79% sensitivity and 83% specificity in distinguishing patients with BPH from control subjects.⁹ The I-PSS was adopted by the Second International Consultation in BPH in 1993; English and French versions are currently in widespread use as adjuncts to BPH treatment strategies.

Program objective

The program's primary objective was to facilitate clinical decision making regarding referral, pharmacotherapy, and watchful waiting for primary care

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patients presenting with BPH. Needs assessment was conducted using a 28-item questionnaire adapted from the I-PSS by a working party of urologists and family physicians and pilot tested in a small group of family and general practitioners for relevance and clarity. Of 2500 questionnaires mailed to a representative national sample of Anglophone and Francophone primary care physicians in practice for a minimum of 3 years, 281 were returned within 22 days. These were collated and used by the working party to develop a CME program introducing a patient-centred approach to BPH management in primary care that integrated the I-PSS into clinical visits specifically for BPH.

Program components

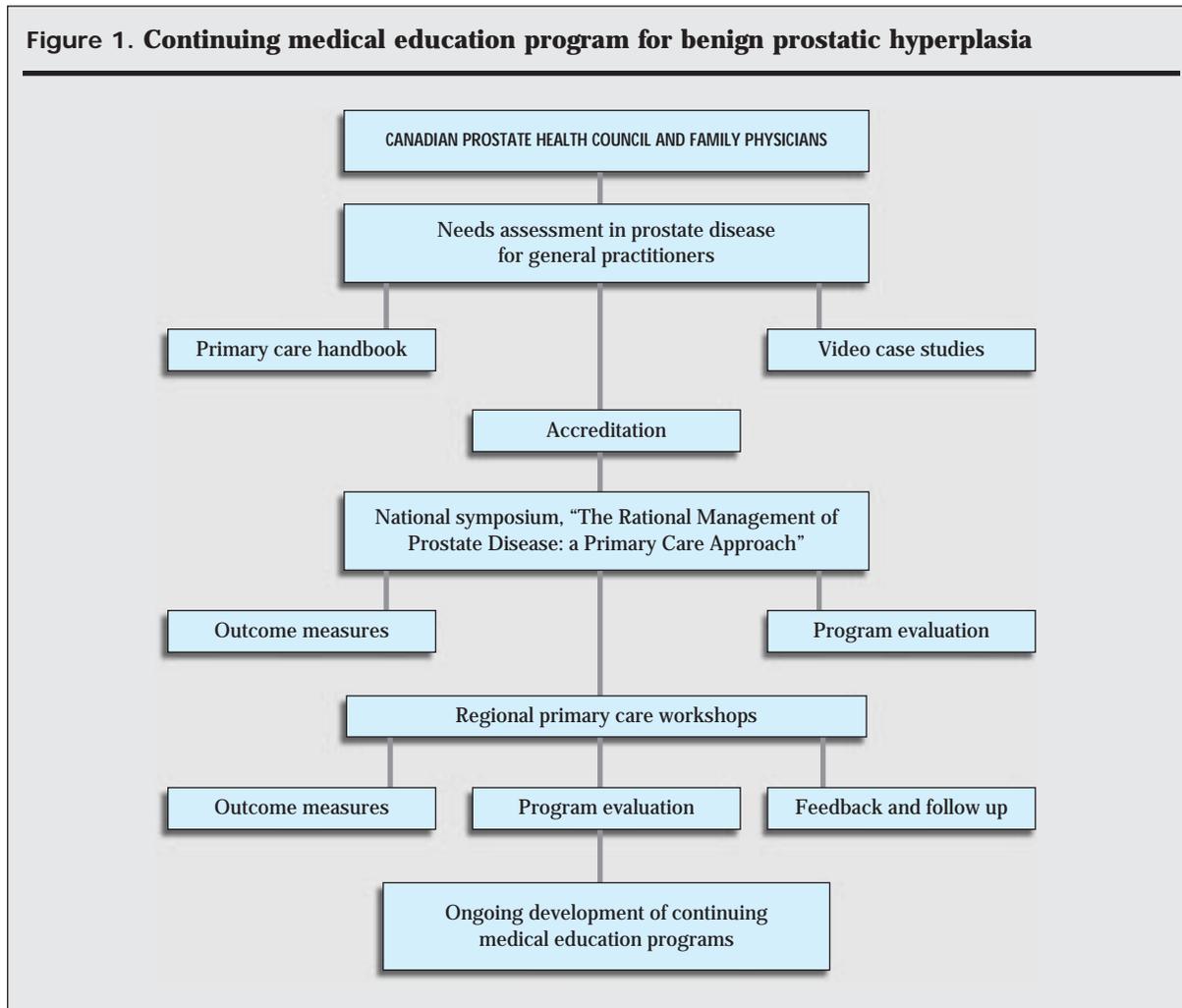
A symposium on BPH attended by 40 "peer leader" family physicians launched the program (**Figure 1**). Plenary sessions focused on conducting appropriate diagnostic screenings for prostate cancer and evaluating BPH, including use of a standardized symptom checklist (I-PSS); assessing the effect of BPH symptoms on patients' lives; developing partnerships with patients for choosing among treatment options; and knowing when and under what circumstances to refer to specialists.

An algorithm for BPH management was provided by the Canadian Prostate Health Council (**Figure 2**). The content of the symposium and the practice recommendations made during this program were developed in cooperation with the Canadian Prostate Health Council and based on clinical practice guidelines developed by the United States Department of Health and Human Services.⁶

Participants attended sessions on adult learning theory, on practice-based small group learning,¹⁰ and on conducting small group workshops with the program's educational materials comprising four video case studies illustrating various presentations of prostatism, including BPH, and a handbook providing detailed information on the case studies and management of BPH appropriate to primary care.¹¹ The I-PSS was a critical component in discussion of probable diagnoses (along with digital rectal examination [DRE]), in need for further assessment, in treatment strategies, and in evaluations of interventions.

Across Canada, 86 peer-led workshops were held with a total of 658 participants. A toll-free telephone line was maintained to provide scientific and technical support to participants.

Figure 1. Continuing medical education program for benign prostatic hyperplasia



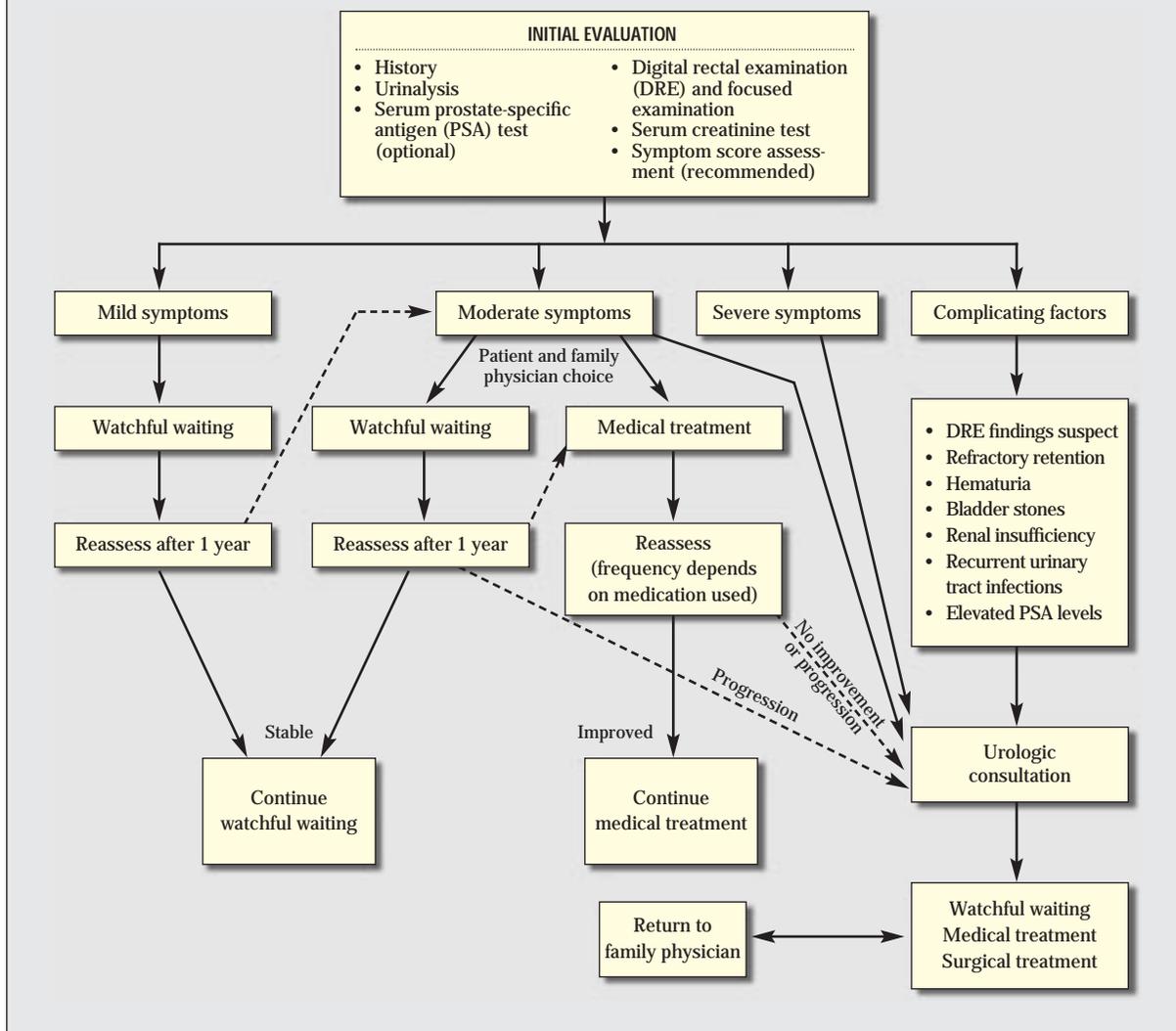
Program evaluation

The program was evaluated through questionnaires asking workshop participants about their practices regarding BPH before, and their "intent-to-practice" after, the workshops. Questions were based on practice recommendations made during the program. Questions covered the range of recommended diagnostic tests for initial BPH assessment and use of the patient-administered I-PSS and Quality of Life Assessment. Factors taken into account when determining treatment interventions; comfort in differentiating and treating mild, moderate, and severe BPH; follow up of BPH interventions to reassess symptoms; and referral practices were also covered (Table 1¹²). For each item, participants were asked to rate how characteristic of their own practice behaviour this type of management of BPH was on a Likert scale ranging from 1 to 7. The answer represented the score for the item.

For confidentiality, only workshop location and date were identified on each questionnaire and only the mean workshop score for each item was calculated and entered into a database for repeated measures analysis using SPSS.¹³ The *n* in all tabulations and in the repeated measures analyses refers to mean total workshop scores. Mean scores were analyzed to obtain total (mean) scores for items before and after the workshop. Descriptive analyses produced minimum and maximum mean scores and the range of scores before and after the workshop.

Analysis of intent to change practice behaviour was conducted using the paired *t* test. An intent to change, calculated as the mean difference between total preworkshop score and total postworkshop score, was considered significant if $P \leq .05$ and the mean difference was greater than half a standard deviation of the total preworkshop score.

Figure 2. Algorithm for diagnosis and treatment of benign prostatic hyperplasia



Of the 86 workshops held, 75 provided complete preworkshop and postworkshop questionnaires. Workshops were excluded if participants provided only preworkshop or postworkshop questionnaires or if they did not wish to complete the program's evaluation component. Ontario and Quebec workshops had disproportionately low response rates. Total number of participants in the program's evaluation component was 544 with a mean of seven per workshop.

Among respondents, 29% were from Ontario, 24% from Quebec, 21% from the Prairies, 16% from British Columbia, and 10% from Atlantic Canada. Just over half (52%) of all respondents practised in urban areas (cities with populations larger than 100 000); 48% practised in rural areas.

Table 2 presents a summary of total scores before the workshops for recommended diagnostic procedures for BPH when patients present with voiding symptoms. Many participants carried out urinalyses and DREs on men with voiding symptoms, and prostate-specific antigen (PSA) tests on men with abnormal results on DRE. Fewer participants screened for prostate cancer with annual DREs for men aged 50 and older. Fewer still administered a standardized symptom score card.

Table 3 presents results of paired *t* tests comparing mean scores for practice behaviours before and after the workshops under four categories: diagnostic maneuvers for men with voiding symptoms; factors influencing decisions regarding treatment for BPH; comfort levels in differentiating severity of BPH and

in treating mild, moderate, and severe BPH; and follow-up and referral practices for BPH.

Practice behaviours most closely linked to a patient-centred approach to managing BPH (administering a symptom score card, measuring the effect of symptoms on patients' lives, considering patient preferences when deciding on interventions, and following up treatment with re-assessment of symptoms several months later) and not commonly practised before the workshops (scores of 4 or less) showed the greatest improvement after the workshops.

Discussion

This CME format, a combination of peer-led, problem-oriented, practice-based, small group sessions, video case studies, and a handbook, was adapted from the model described by Premi and Shannon¹⁴ in their randomized controlled trial of a CME program and was intended to engage participating physicians in the process of problem solving as a prerequisite for learning.¹⁵ Traditionally, CME has focused on disseminating information, but it has become increasingly clear^{16,17} that acquisition of knowledge is less important in changing physicians' behaviour than the social context of learning. Habit and custom, the beliefs of peers, and social norms are the major determinants.¹⁸

Theoretically, the most effective methods of changing physician behaviour were to predispose physicians to change by disseminating information and improving knowledge, skills, or attitudes; to create a more hospitable practice environment in which behavioural change can be effected; and to reinforce change with audits and feedback.¹⁹ Interventions classified as weak in changing physician performance or patient outcomes include didactic CME, attendance at conferences or seminars, and receipt of unsolicited mailed materials. Moderately effective interventions are based on audit and feedback (especially if done concurrently) directed at specific practitioners and delivered by peers and opinion leaders. Potent interventions use multiple strategies and include reminder systems and academic detailing.¹⁹

Small group CME activities including peer discussion and interaction are more likely to change physician behaviour than large group sessions.^{20,21} Patient-centred educational interventions are effective in management of diabetes,²² smoking cessation,²³ and incorporation of preventive strategies into office practice.²⁴ The program described in this paper gathered the CME components currently recognized as most likely to be effective (initial needs assessment, problem-based educational materials, opportunities for

Table 1. Practice behaviours related to practice guidelines on diagnosis and treatment of benign prostatic hyperplasia: *Participants were asked to rate how characteristic each item was of their own practice on a scale of 1 to 7.*

Measure the effect of voiding symptoms on quality of life (level 2 recommendation).
Use a valid symptom score to assess men with benign prostatic hyperplasia (BPH) (level 1 recommendation).
Feel comfortable in my ability to detect prostate cancer by digital rectal examination (DRE).
Do DRE as part of a periodic physical examination of men older than 50 (level 2 recommendation).
Do DRE as part of a periodic physical examination of men with voiding symptoms (level 1 recommendation).
Do a prostate-specific antigen (PSA) test on men with voiding symptoms (level 2 recommendation).
Do PSA test on men with abnormal results of DRE (level 1 recommendation).
Do urinalysis on men with voiding symptoms (level 2 recommendation).
Do serum creatinine test on men with voiding symptoms (level 2 recommendation).
Use prostate size to determine therapy for patients with BPH (not recommended,* level 2).
Use symptom severity to determine therapy for patients with BPH (level 2 recommendation).
Use patient preference to determine therapy for BPH (level 2 recommendation).
Feel comfortable differentiating mild, moderate, and severe BPH.
Feel comfortable initiating medical treatment for patients with mild BPH.
Feel comfortable initiating medical treatment for patients with moderate BPH.
Feel comfortable initiating medical treatment for patients with severe BPH.
Refer patients with BPH with mild symptoms (not recommended, level 2).
Refer patients with BPH with moderate symptoms (not recommended, level 2).
Refer patients with BPH with severe symptoms (level 1 recommendation).
Measure change in symptoms 4 months after therapy (level 3 recommendation).

* *Although use of prostate size to determine therapy was not recommended at the time of the symposium, new data indicate that finasteride should be prescribed only for men with large prostates (level 1 recommendation).¹²*

participants to develop implementation strategies through discussion with peers) and applied them to making BPH treatment advice more patient centred.

A 1986 study showed that physicians implemented 50% of the practice changes they reported intending to make as a result of participating in a CME program.²⁵ Further studies measuring intent to change against actual changes made are required for a complete understanding of the effectiveness of Premi and Shannon's¹⁴ small group CME model.

CME

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Table 2. Mean scores for recommended diagnostic maneuvers for patients with voiding symptoms: Responses from 75 participants before workshops on a Likert scale ranging from 1 to 7.

MANEUVER	MINIMUM SCORE	MAXIMUM SCORE	MEAN (\pm SD)
Urinalysis	1.56	7.00	6.08 (1.02)
DRE	1.44	7.00	6.04 (1.03)
Annual DRE for men >50 y	1.56	7.00	5.78 (1.16)
PSA test	0.78	6.40	4.14 (1.18)
PSA test after abnormal DRE findings	1.22	7.00	6.03 (1.07)
Serum creatinine test	1.11	6.80	4.56 (1.13)
Symptom score	0.22	4.67	2.05 (0.90)

DRE—digital rectal examination, PSA—prostate-specific antigen, SD—standard deviation.

Conclusion

Results of the evaluation point to the benefits of practice-based small group, peer-led workshops in introducing new practice behaviours for primary care management of BPH. Generalizability of the program is limited by several factors. The sample was not representative of the sex, age, and geographic distribution of primary care physicians in Canada. The research design was not experimental. There was no follow up on intentions to practise. This peer-led CME program found physicians willing to assess the effect of BPH on patients' lives and to maintain an ongoing relationship with patients in monitoring BPH symptoms and deciding on course of treatment. ✦

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Table 3. Paired *t* tests of preworkshop and postworkshop total scores

	PAIRED DIFFERENCES		<i>t</i>	DF	P (2-TAILED)
	MEAN	STANDARD ERROR OF THE MEAN			
DIAGNOSTIC MANEUVERS					
Digital rectal examination (DRE)	.13	.15	.88	74	.38
Annual DRE for men > 50	.26	.15	1.81	74	.07
Prostate-specific antigen (PSA) test	.16	.17	.96	74	.34
PSA if DRE findings abnormal	1.13	.18	6.33	74	.00
Urinalysis	.13	.16	.84	74	.41
Serum creatinine test	.83	.17	4.95	74	.00
Symptom score	2.54	.15	16.65	74	.00
DETERMINANTS OF TREATMENT					
Prostate size	.33	.11	2.96	74	.00
Symptom severity	.48	.15	3.27	74	.00
Patient preference	.91	.13	7.21	74	.00
Effect on quality of life	1.56	.15	10.64	74	.00
COMFORT LEVELS					
DRE for prostate cancer screen	.40	.11	3.68	74	.00
Differentiating BPH severity	1.0	.12	9.00	74	.00
Treating mild BPH	.91	.12	7.56	74	.00
Treating moderate BPH	.94	.12	8.02	74	.00
Treating severe BPH	.55	.15	3.67	74	.00
FOLLOW UP AND REFERRAL					
Follow up after therapy	1.05	.15	6.96	74	.00
Refer for elevated PSA level	5.57E-02	.14	.39	74	.70
Refer mild BPH	-.21	8.74E-02	-2.44	74	.02
Refer moderate BPH	-.39	.12	-3.28	74	.00
Refer severe BPH	-5.84E-02	.14	-.42	74	.68

Key points

- This program, developed to improve family physicians' ability to diagnose and manage benign prostatic hyperplasia (BPH), relied on leadership by trained peers and focusing on problem cases in small groups. These methods have been proven effective in changing physician behaviour.
- Practice behaviours closely linked to a patient-oriented approach, including use of a symptom score card measuring the effect of BPH on quality of life and considering patient preferences for treatment, showed the greatest improvement.

Points de repère

- Ce programme, conçu pour améliorer les habiletés des médecins de famille dans le diagnostic et la prise en charge de l'hyperplasie prostatique bénigne, s'appuyait sur le leadership de pairs formés à cet égard et se concentrait sur des cas de problèmes présentés en petit groupe. Ces méthodes se sont révélées fructueuses dans le changement du comportement des médecins.
- Les habitudes de pratique étroitement liées à une approche centrée sur le patient, notamment le recours à une fiche de barème des symptômes mesurant les répercussions de l'hyperplasie prostatique bénigne sur la qualité de vie et la prise en compte des préférences thérapeutiques du patient, ont obtenu une plus grande amélioration.

Inc, a professional health care communication organization, and received MAINPRO-M1 College of Family Physicians of Canada accreditation.

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