

Brief action planning to facilitate the management of acute low back pain with radiculopathy and yellow flags: a case report

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Introduction: Brief action planning (BAP) is a collaborative tool to support patients' self-management goal setting and action planning. BAP facilitates patient self-reflection, and provides opportunity to establish goals of their own priority.

Case presentation: A 55 year-old female with recent-onset low back pain with L5 nerve root distribution, described severe pain in the low back and sharp pain and tingle-sensations down to her right foot. Pain worsened with sitting, coughing, and bending. She was diagnosed with lumbar and other intervertebral disc disorder with radiculopathy (ICD 10: M51.1).

Treatment: Initial treatment included reassurance,

Un bref plan d'action visant à faciliter la prise en charge de la lombalgie aiguë avec radiculopathie et avertisseurs jaunes : rapport de cas

Introduction : L'outil collaboratif Brief action planning (BAP) sert à aider les patients à se fixer des objectifs et à prévoir leurs interventions. Il favorise l'autoréflexion du patient tout en lui permettant d'établir des objectifs selon l'ordre de priorité qu'il établit lui-même.

Présentation du cas : Une femme de 55 ans souffrant d'une lombalgie d'apparition récente, accompagnée d'une douleur selon la distribution de la racine nerveuse L5, se plaignait d'une douleur lombaire intense, d'une douleur aiguë et de picotements jusqu'au pied droit. La douleur s'aggravait en s'assoissant, en toussant et en se penchant. On lui a diagnostiqué un trouble du disque intervertébral lombaire avec radiculopathie (CIM 10 : M51.1).

Traitement : On a commencé par reconforter la

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The authors have no disclaimers or competing interests to report in the preparation of this manuscript. This work was supported by the Canadian Chiropractic Research Foundation (CCRF). The funding organization was not involved in the design or conduct of this work.

The involved patient provided consent for case publication.

education, promotion of movement, and manual therapies. Symptoms worsened at the eighth visit (five weeks) where she also demonstrated pain-catastrophizing behaviours and an over-reliance on passive treatment strategies (i.e., psychosocial factors or yellow flags). BAP was introduced into her treatment plan to set achievable goals for her care.

Outcome: Decreased pain and disability were reported after incorporating BAP into care. Reduced pain-catastrophizing and reduced over-dependence on passive strategies were also demonstrated. Clinical gains were sustained at the 10-week follow-up assessment.

Key clinical message: We describe the utilization of brief action planning as a technique for improving adherence to evidence-based clinical practice guideline recommendations in a patient with acute low back pain and radiculopathy, and late-onset psychosocial factors.

(JCCA. 2021;65(2):212-218)

KEY WORDS: chiropractic, low back pain, rehabilitation, radiculopathy, self-management, risk factors, health behaviour, guideline adherence, case report, brief action plan.

Introduction

Back pain is a common source of disability; more than 80% of people experience at least one episode of back pain during their lifetime.¹⁻⁴ First-line treatment of low back pain (LBP) with or without radiculopathy includes education on the expected course of recovery, reassurance, advice regarding effective self-management strategies, and support for continued activity.⁵⁻⁷ Self-management strategies, and the promotion of physical activity in particular, are recommended to help reduce individual and societal burdens associated with back pain, including delayed recovery/chronicity, reduced function and participation in activities (e.g., work, school, community life, leisure activities), and increased costs associated with healthcare utilization and long-term disability.^{8,9} Patients who are

patiente, l'informer, favoriser le mouvement et à administrer des thérapies manuelles. Ses symptômes se sont aggravés à partir de la huitième consultation (au bout de cinq semaines). Elle a commencé à dramatiser sa douleur et à trop compter sur des stratégies de traitement passives (c'est-à-dire intervention sur les facteurs de risque psychosociaux (qu'on appelle aussi « drapeaux jaunes »)). On a utilisé le BAP pour qu'elle puisse se fixer des objectifs thérapeutiques réalisables.

Résultat : On a observé une diminution de la douleur et de l'incapacité après le début de l'utilisation du BAP. On a aussi noté une réduction de la dramatisation de la douleur et de la dépendance excessive envers les stratégies passives. La patiente a continué à faire des gains jusqu'à l'examen de suivi, à la 10^e semaine.

Message clinique clé : Nous définissons l'outil BAP comme une technique servant à favoriser l'observance des directives et des recommandations fondées sur des preuves chez un patient souffrant de lombalgie aiguë accompagnée d'une radiculopathie et de facteurs psychosociaux tardifs.

(JCCA. 2021;65(2):212-218)

MOTS CLÉS : chiropratique, lombalgie, rééducation, radiculopathie, autogestion, facteurs de risque, comportement de santé, respect des directives, rapport de cas, outil collaboratif Brief action plan

supported to actively self-manage other chronic illnesses report fewer symptoms, an improved quality of life, and lower healthcare utilization.¹⁰ Yet, there is incongruence between the care patients *should* receive, and the care they *do* receive in the management of LBP and other disorders.^{9,11,12} In addition, patient adherence to self-management recommendations is often suboptimal.^{13,14}

Patient-centered care that coincides with a patient's self-management goals, preferences, and values is expected to improve their self-efficacy, adherence to recommendations, and lead to improve health-related outcomes.¹⁵ Strategies such as active listening and empathy may be of value to active planning partnerships, as these strategies have been shown to foster the rapport between patient and practitioner.^{16,17} Action planning partnerships

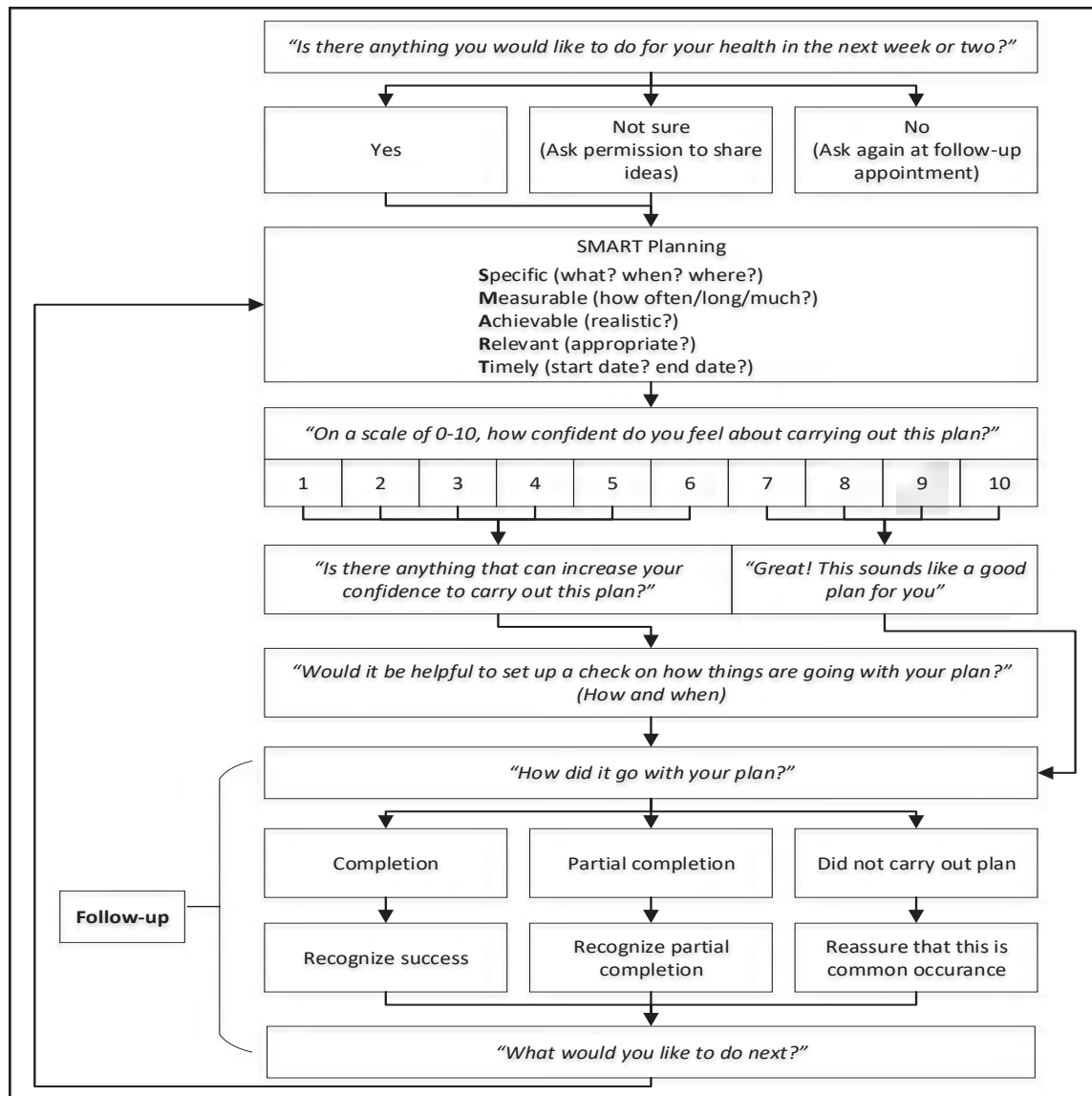


Figure 1.

Brief Action Planning flowchart. Adapted from Gutnick D, Reims K, Davis C, Gainforth H, Jay M, S. C. Brief Action Planning to Facilitate Behaviour Change and Support Patient Self-Management. JCOM. 2014; 21(1): 17-29.

between a patient and practitioner have been used to improve self-efficacy in chronic-illness management and disease prevention, and hold promise for the same in musculoskeletal health.^{10,16,18-20} Brief action planning (BAP) is a collaborative tool to support a patient's self-management goal setting and action planning.

BAP is a tool that can be used to facilitate patient centered care by utilizing a stepwise process where practi-

tioners work collaboratively with patients to ensure goals and action plans are both meaningful and realistic for the patient.^{10,18,21} BAP supports principles of patient-centered care such as those outlined by the Picker Institute: access to care, respect for patient preferences, physical comfort, information and education, emotional support and alleviation of fear or anxiety, involvement of family, coordination of care, and continuity/transition of care.²²

In a progression of three questions during the planning process, BAP respects patient preferences and considers environmental needs while promoting access to care.^{10,18} With the opportunity to facilitate the patient's own decision-making processes if needed, BAP allows for practitioner provided clinically-relevant information.^{10,18} The second in the sequence of three questions aims to assess the patient's confidence in their capacity to adhere to their newly identified plan, thereby offering emotional support.^{10,18,23} By working collaboratively to increase confidence if needed, BAP allows for the principles of involvement of family and coordination of ancillary support. The third element of BAP establishes a follow-up regarding the implemented plan and iteratively establishes the plan progression to promote self-efficacy and self-management.^{10,24}

Patients experiencing additional barriers to recovery such as yellow flags may benefit from BAP. Yellow flags are psychosocial factors indicative of longer term chronicity and poor outcomes.^{5,6,25,26} BAP facilitates the patient's self-reflection, and provides patients with an opportunity to establish a goal of their own priority.^{18,23} Patients may not be able to identify a relevant goal on their own, so making suggestions, with the patient's permission, may facilitate the patient's own decision-making processes.

Through this case report, we describe the utilization of BAP in conjunction with evidence-based clinical practice guideline recommendations for a patient experiencing recent-onset LBP with radiculopathy who subsequently developed psychosocial barriers to recovery (i.e., yellow-flags).

BAP in action

A schematic representation of the steps to implement BAP into clinical practice is provided in Figure 1.

BAP goals are time-bound by asking the patient "Is there anything you would like to do for your health in the next week or two?" Their goal may be further refined into a plan by using the common objective approach: SMART (specific, measurable, achievable, realistic, and timely). The choice of activity to change, or not to change, is the patient's alone.

The provider then aims to assess the patient's confidence in their capacity to adhere to their newly identified plan by asking: "On a scale of zero to ten, how confident

do you feel about carrying out this plan?"¹⁰ A confidence level below 7/10 implies low self-efficacy, and may be a poor prognostic factor of the patient's adherence to their plan.¹⁰ Nonetheless, affirming their reported confidence of any level keeps the locus of control with the patient. In cases where low patient self-efficacy is identified, the practitioner can then work in partnership with the patient to support an increase in their self-efficacy, if necessary, by asking: Is there anything that can increase your confidence to carry out this plan? The patient may be challenged by problem-solving this on their own, in which case the practitioner may again make suggestions, with the patient's permission, to facilitate the process.

In chronic-illness management and disease prevention, patients may be more likely to follow through with a plan if they report back their progress.^{10,24} Setting a follow-up with the patient establishes accountability and aims to further their self-efficacy by asking: "Would it be helpful to set up a check on how things are going with your plan?" Utilization of objective-based SMART planning may be of value again, when collaboratively establishing a follow-up opportunity. When setting a time-bound follow-up opportunity, consider that there is some indication that checking in earlier in the process is important.¹⁰

Upon follow-up, reassurance of patient successes, or even their partial successes, is important.¹⁰ A patient may discount their partial success by focusing on the elements of their action plan that were poorly adhered to. Reframing the conversation to instances where there was adherence to the plan attempts to increase their confidence and thus their self-efficacy for the next iteration of BAP. Even if the patient reports no adherence to the action plan, the clinician has the opportunity to reframe by asking "What would you like to do for your health next?" and repeating the BAP process.

Case presentation

A 55-year-old female presented with recent-onset LBP with related leg pain. Recent-onset, or acute pain is defined as pain or symptoms that restrict daily activities and present for zero-to- three months duration.⁶ The mechanism of injury was undisclosed.

A problem-focused history and examination was conducted. She reported taking prescription medication for hypertension (drug class and dosing not specified). She was self-employed and she described her lifestyle as sed-

entary. Her symptoms began two weeks prior to presentation and were described as a sharp pain in the low back and both buttocks with a sharp pain and tingle-sensation down her right leg and foot. She described a conventional L5 nerve root distribution. She denied changes to her bowel/bladder function or saddle sensation. Her complaint worsened with sitting, coughing, or bending forward. She used heat, self-massage and over-the-counter medication to manage her pain. Her presenting complaint was preceded one month earlier by a less painful episode that had been treated predominantly with passive therapies and minimal self-management advice. She reported poor satisfaction with the results, citing amelioration of that complaint for one week's duration.

Passive single straight leg raise exacerbated her complaint bilaterally. Lumbar forward flexion and lateral flexion were moderately painful. Sensory testing of the right L5 nerve root distribution revealed hypoesthesia. Lower extremity reflex and motor assessments were unremarkable. Verbal numeric pain rating scale was 8/10 where 10 "is the worst imaginable pain" and 0 is "no pain at all". Her Oswestry Disability Index score was 18/50 (moderate disability). She was diagnosed with lumbar and other intervertebral disc disorder with radiculopathy at intake (ICD 10: M51.1).²⁷

Initial behavior-based first-line treatments included empathetic reassurance regarding the expected course of recovery, education promoting self-management including active care and hurt-vs-harm, and advice promoting well-tolerated movement, both generally, and utilizing structured exercises. The patient attended a total of 11 clinical visits over a period of 12 weeks and was managed according to evidence-based recommendations. This time-bound plan included active-care components and manual therapies (spinal manipulative therapy (SMT) and soft tissue therapy (STT)), congruent with clinical practice guidelines.^{5,6} Her initial response to care was favorable, with her numeric pain rating scale decreasing to 5/10 within the first week over three clinical visits.

On her eighth visit for care, five weeks after initial presentation, the patient stated "I can't continue like this", demonstrating some pain-catastrophizing in response to an exacerbation of her numeric pain rating scale to 7/10. Prior to this exacerbation she reported that she was "*being lazy and not doing exercises*" and "*haven't had the time to do exercises*", and that she had decreased her adherence to

remaining active. These reports demonstrated an increasing over-reliance on manual therapy as a passive coping strategy (yellow flag). Accordingly, the presence of these yellow flags likely contributed to her poor pain reduction outcomes and protracted rehabilitation progress.

In response, a partnered approach to revising her self-management behaviours was undertaken. She was asked the first BAP question: "Is there anything you would like to do for your health in the next week or two?" She identified "*I would like to get up more frequently to take standing breaks.*" She was then asked; "On a scale of zero to ten, how confident do you feel about carrying out this plan?"¹⁰ The patient rated her confidence 5/10 on a numeric rating scale, implying inadequate self-efficacy. She was then asked: "Is there anything that can increase your confidence to carry out this plan?" Her response included setting a reminder on her phone to take standing breaks when working in 45-minute intervals. The action plan was now specific (set a reminder on my phone), measurable (get up every 45 minutes when working), time bound (in the next two weeks), and in her own appraisal more achievable and realistic.

The patient reported successful implementation of her action plan at her next visit. The numeric rating scale score for her leg-dominant pain improved to 2/10.

Follow-up and outcomes

BAP was iteratively used at each subsequent visit to reconfirm, or progress upon, patient-relevant goals and action plans that were congruent with evidence-based clinical practice guidelines. At each subsequent visit, successful implementation, or partial implementation, of the action plans was met with reassurance from the practitioner.

Decreased pain-catastrophizing and gains in self-efficacy were apparent during these subsequent patient visits: "*[I] see the difference. [I am] more confident now because I can tie it [active self-management] to how I feel*". Decreased over-reliance on passive coping strategies also became apparent: "*I want to keep being active*". She presented for a total of three visits over six weeks subsequent to the inclusion of BAP in her care. Gains in clinical outcomes and patient self-efficacy were reported through to the last of her treatment sessions.

A follow-up examination was conducted 16 weeks after initial presentation (10 weeks after the incorporation of BAP). Passive single straight leg raise assessment im-

proved to unremarkable. Lower extremity sensory testing improved to unremarkable. Lower extremity motor and reflex testing remained unremarkable. The reductions in pain and disability were sustained; her numeric pain rating scale improved to 0/10 and her Oswestry Low Back Disability Index score improved to 8/50 (minimal disability).

Discussion

The purpose of this case report was to illustrate how BAP was successfully used to facilitate increased patient self-efficacy and improved patient adherence to evidence-based self-management strategies, congruent with clinical practice guideline recommendations, for the management of acute LBP with radiculopathy in the presence of yellow flags. Self-efficacy and adherence to evidence-based self-management strategies improved after the incorporation of BAP in the patient's care plan. The patient-reported improved function and reduced pain at follow-up assessment at 10 weeks. No adverse events were identified.

In patients with spinal pain, self-management strategies are used to decrease pain, improve function and address psychological distress.⁵⁻⁸ The use of strategies that facilitate collaborative decision-making and problem-solving should be considered.^{10,23,28-30} In the context of musculoskeletal care, strategies should align with the biopsychosocial model of health.^{15,26} Patient goal-setting may have positive effects on patient self-efficacy, patient adherence to self-management strategies and healthful lifestyle behaviours, which may ultimately improve pain and functional outcomes.^{23,31}

Limitations

Our case is hypothesis-generating and provides insight as to how BAP may be used in a clinical setting. We did not use validated outcome measures to assess the level of patient activation, self-confidence or self-efficacy pre- and post-treatment; these were measured anecdotally. This limitation may have contributed to an over-interpretation of our findings.³² In addition, we did not systematically assess adverse events; these were collected anecdotally. Finally, implementing a psychosocial assessment, such as the STarTBack tool³³, at the outset of care might have provided insight into the presence of yellow flags earlier in the care enabling the provider to intervene with the fundamentals of BAP before the patient's symptoms worsened.

Future research

Additional follow-up is needed to assess whether self-efficacy and adherence to evidence-based self-management strategies are sustained beyond the timeframe observed in this report. Future analytic studies may assess whether BAP is an effective strategy for promoting self-management, congruent with evidence based clinical practice guidelines, for people with LBP with radiculopathy. Future work in this field should incorporate validated outcome measures including, but not limited to, the Patient Activation Measure (PAM)³⁴, the Patient Assessment of Chronic Illness Care (PACIC) survey questionnaire³⁵, and the Patient-Specific Functional Scale (PSFS)³⁶. The application of patient-centered communication and counseling techniques such as BAP may be helpful in response to the increasing adoption of telehealth. Future studies may assess the transferability of BAP techniques to telehealth case management.

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