

Provider-patient communication: an illustrative case report of how provider language can influence patient prognosis

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Patient-provider communication can lead to unhelpful ideas and beliefs about a patient's condition, negatively impacting their clinical outcome. A 34-year-old male Veteran presented for an evaluation of high impact chronic low back pain. Previous interactions with various healthcare providers resulted in the Veteran viewing his condition as ominous and in need of intervention, however clinical findings did not support these beliefs. Our Veteran underwent six visits in the chiropractic clinic with treatment consisting of pain education, utilization of cognitive behavioral principles, active home care exercises and spinal manipulation, resulting in improvements in functional and objective outcome measures. This case report highlights the impact of misalignment between an early contact healthcare provider and patient misunderstanding of

La communication entre le fournisseur de soins de santé et le patient : un rapport de cas illustrant l'influence du langage du fournisseur sur le pronostic du patient. La communication entre le fournisseur de soins de santé et le patient peut conduire à des idées et à des croyances inutiles sur l'état du patient, ce qui a un impact négatif sur son résultat clinique. Un vétéran de 34 ans s'est présenté pour une évaluation d'une lombalgie chronique à fort impact. Des interactions antérieures avec divers fournisseurs de soins de santé ont amené le vétéran à considérer son état comme inquiétant et nécessitant une intervention, mais les résultats cliniques n'ont pas appuyé ces croyances. Notre ancien combattant a effectué six visites à la clinique chiropratique subissant chaque fois un traitement consistant en une éducation à la douleur, l'utilisation de principes cognitivo-comportementaux, des exercices de soins actifs à domicile et des manipulations vertébrales, ce

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their condition on long term outcomes. It serves as an example of how physicians utilizing pathoanatomic explanations to describe a patient's chronic low back pain diagnosis can alter the patient's beliefs about their condition.

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Background

Chronic low back pain (CLBP) is multifactorial, and often perpetuated by poor self-efficacy, fear avoidance or catastrophizing behavior.¹ Low back pain is also the leading cause of disability worldwide, with the years lived with disability increasing by 54% between 1990 and 2015.² Peak prevalence of low back pain ranges from 28%-42% in adults ages 40-69 years old³, and disproportionately affects Veterans as they are more likely to report having pain in the past three months with the rate of severe pain being 50% higher than civilians⁴.

Most episodes of low back pain resolve quickly, and are self-limiting²; however, recent evidence suggests that up to 32% of patients transition from acute to chronic low back pain⁵. No longer an acute biomechanical response, CLBP is characterized by a range of psychological, biophysical, and social contributors that can affect quality of life.² Clinical practice guidelines support the assessment of unhelpful beliefs and other psychosocial risk factors, or yellow flags, in order to guide treatment and further predict prognosis in cases of CLBP.⁷ Yellow flags include unhelpful beliefs about pain, such as perceiving a condition as likely to worsen, avoidance of activity due to pain, or treatment preferences that do not fit with best practices, such as preference for passive modalities.^{6,8} There is a strong correlation between a patient's thoughts, ideas or beliefs of their pain experience, their disability, and its

qui a entraîné des améliorations dans les mesures de résultats fonctionnels et objectifs. Ce rapport de cas met en évidence l'impact d'un mauvais alignement entre un fournisseur de soins de santé de premier contact et l'incompréhension du patient de son état sur les résultats à long terme. Il sert d'exemple de la façon dont les médecins utilisant des explications d'anatomie pathologique pour décrire le diagnostic de lombalgie chronique d'un patient peuvent modifier l'idée que se fait le patient de son état.

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MOTS CLÉS : rapport de cas, chiropratique, lombalgie, communication avec le patient, langage du fournisseur, vétérinaire

chronicity.⁹ These beliefs are modifiable factors and can be influenced either positively or negatively by health-care providers.¹⁰ Strategies to address these risk factors include pain education, and cognitive behavioral principles. The effectiveness of interventions targeting unhelpful beliefs and additional yellow flags is limited, however evidence does report consistently positive results when compared to interventions that do not address these risk factors.⁶

With evidence supporting the positive influence health-care providers can have on psychosocial risk factors that affect the chronicity of low back pain⁶, healthcare providers can also negatively influence prognosis and the development of unhelpful beliefs due to the iatrogenic potential of their words¹¹. Although many factors influence beliefs about low back pain, communication between healthcare providers and their patients may be the most important.¹² Communication and the language used to discuss a patient's symptoms and/or diagnosis can positively or negatively affect their attitudes, beliefs and overall prognosis.^{12,13} Misalignment between the patient's interpretation of the provider's language and their intended message can also influence outcomes.^{12,13}

The purpose of this case report is to present one example of recognizing and addressing misalignment between previous healthcare provider interactions and psychosocial risk factors to improve prognosis. This re-

port aims to further support the influence provider language has on patient outcomes and calls on providers to be diligent in screening for and addressing yellow flags.

Case presentation

A 34-year-old Caucasian male, Veteran of the United States Army, presented to a Veterans Administration (VA) Community Based Outpatient Chiropractic Clinic for evaluation of chronic low back pain with intermittent, bilateral, non-dermatomal anterior thigh paresthesia of insidious onset over 13 years prior. The presenting complaint was chronically high impact – affecting work, social and self-care activities. No pertinent medical or family history was identified. Despite a gradual and localized initial onset, the Veteran recounted his understanding of his condition being ominous as he recalled the interaction with his initial healthcare provider. He described a “collapsed lower lumbar” that he reported, according to this initial contact provider, would require surgery and, should he decline, he would be wheelchair-bound. Chart review indicated this was a primary care provider in 2008 who had taken plain film lumbar radiographs revealing multilevel Schmorl’s type nodes with a plan for referral to physical therapy. Chart review also indicated documentation stating a surgical consult was not appropriate for his axial back pain at that time, which was not consistent with this Veteran’s current understanding of the same interaction. Years later, he recounted a community chiropractic provider “would not touch [him] because [his] back was so bad”, further contributing to his thoughts, beliefs and ideas of an ominous condition in need of surgery.

The Veteran was able to self-manage periodic exacerbations until a pain episode following an extended drive home from work prompted an Urgent Care visit in 2021. His pain presentation was similar to prior episodes, consisting of axial low back pain with intermittent, bilateral, non-dermatomal anterior thigh paresthesia without lower extremity weakness or cramping. He underwent lumbar computed tomography imaging, revealing right central disc extrusion at L5/S1. Despite the palliative effects of intramuscular ketorolac tromethamine during this urgent care visit, fear surrounding his condition was heightened secondary to a provider sharing a story of their relative undergoing surgery for a similar imaging finding. As a result, the Veteran presented to his VA primary care provider requesting a neurosurgical consult. Chart review

indicated an electronic consult (E-consult) was placed to neurosurgery who suggested obtaining lumbar magnetic resonance imaging (MRI) and nerve conduction studies prior to face-to-face consultation.

The Veteran’s 2021 lumbar spine MRI was significant for mild disc bulge at L4/L5, and moderate left and mild right L5/S1 foraminal narrowing secondary to central and right paracentral disc herniation. Electromyography and nerve conduction velocity studies were significant for chronic right L5 radiculopathy. Subjective complaints did not correlate with L5 radiculopathy, while clinical examination findings did support chronic, mild nerve tension without progressive neurological deficits on the right. Based on this, the neurosurgeon recommended conservative care for pain management.

Pertinent physical examination findings included mild/moderate limitations in active lumbar range of motion complicated by mild kinesiphobia. Neurologic examination was significant for an absent patellar reflex on the right and hypoesthesia to pinprick about the right proximal anterior thigh, and right L5 and S1 dermatomal regions, corroborating with known chronic right L5 radiculopathy on electrodiagnostic testing. Orthopedic examination provoked generalized lumbosacral pain with nerve tension described in the right lower extremity when challenged with neurodynamic testing. Repeated movement in prone lumbar extension improved active range of motion and axial back pain without peripheralization.

The working diagnosis provided by our chiropractic clinic was chronic, non-specific low back pain with EMG evidence of chronic, right L5 radiculopathy without correlating subjective radicular symptoms. The prognosis was deemed poor, secondary to complicating factors such as the chronicity of the chief complaint and the Veteran’s subjective report of how various providers communicated with him concerning his diagnoses and invasive treatment needs.

Initial chiropractic treatment included reassurance and education concerning etiology of the Veteran’s CLBP. All imaging was reviewed and the Veteran’s questions were answered. The initial treatment also consisted of active patient initiated repeated end range loading exercises. Follow-up care included spinal manipulative therapy as well as utilization of cognitive behavioral principles and pain education surrounding pacing, graded activity, sleep hygiene and hurt versus harm concepts, addressing kin-

esiophobia and increasing exercise tolerance (see Table 1). The patient denied any adverse events following care.

This trial of care included six visits at one-week intervals. The Veteran's progress was assessed by subjective report and outcome measures including Visual Analog Scale (VAS) and Patient-Reported Outcomes Measurement Information System (PROMIS) Pain Interference short form 6b. Functional improvements included increased ability to hunt for recreation without being lim-

ited by back pain, ability to don or doff socks, performing side jobs such as installing docks, and performing his job as a mechanic with manageable pain. He did not experience any episodes of lower extremity symptoms during the trial of care. A 42% improvement in VAS occurred over the trial of care (see Table 1). The Veteran also demonstrated a 10.3-point improvement in PROMIS Pain Interference with 3.5-5.5 points being clinically significant.¹⁴

Table 1.
Case management over six chiropractic visits at one-week intervals.

Visit	Manual Therapy	Patient Education/ Home Care Advice	VAS (out of 100mm)	PROMIS Pain Interference 6b T-score	Functional Improvements
Initial Evaluation	—	Reviewed past imaging findings and educated patient on unlikely correlation between these findings and his symptoms Provided reassurance surrounding the absence of red flags or progressive neurological deficits Educated patient on the nature of chronic low back pain Prescribed repeated end range loading exercises	57mm	66.4	
2 nd visit	Spinal manipulation – due to limited response to home care	Reviewed hurt versus harm concepts Education surrounding pacing activity	—	—	Increased tolerance to installing docks and performing work duties
3 rd visit	Spinal manipulation	Advice to stay active	—	—	Increased tolerance to installing docks and performing work duties
4 th visit	Spinal Manipulation	Education surrounding graded activity	34mm	65.5	Increased tolerance to hunting and performing work duties
5 th visit	Spinal Manipulation	Patient presented wearing a lumbar support brace recently given by physiatrist, we advised limiting its use	—	—	Successfully used pacing methods during his weekend activities
6 th visit	Spinal Manipulation	Education on sleep hygiene practices	15mm	56.1	Required assistance donning socks only 1 day of the week Felt he did not need the lumbar brace between visits

VAS = Visual analog scale, PROMIS= Patient Reported Outcomes Measurement Information System

Discussion

It was the authors' interpretation of the Veteran's subjective history that his "collapsed lower lumbar" in need of surgical intervention may have been a case of misalignment from the incidentally found Schmorl's nodes on initial imaging. Although Schmorl's nodes can be a potential pain generator, most are asymptomatic, with a high prevalence of 19% in the asymptomatic population¹⁵ and do not require additional intervention¹⁶. Therefore, it is reasonable to discern that describing them as a pathoanatomic process that violates the integrity of the vertebral body may have had an iatrogenic effect on the patient's beliefs about their condition. Additional context, including the high prevalence of Schmorl's nodes on imaging studies and lack of clinical significance in most cases, may have prevented the development of unhelpful ideas and beliefs in this scenario. Additionally, disc pathology was reported in this case after the Veteran underwent lumbar MRI; however, it is widely recognized that the prevalence of asymptomatic disc protrusions is high, reported at 29% at 20 years-old and increasing to 43% at 80 years of age, and findings on advanced imaging need to clinically correlate with the patient's symptoms in order to be determined to be clinically significant.¹⁷ Therefore, this is the most likely explanation for this case and was concluded after conducting a thorough patient intake and physical examination, but was also supported by the neurosurgery consultation, confirming the lack of necessity for additional intervention. When comparing clinical predictions for the vertebral level of lumbar radiculopathy and MRI findings, a majority of patients do not have matching signs or symptoms, further supporting the disconnect between this case presentation and diagnostic findings.¹⁸ In cases where clinical examination does not correlate with diagnostic imaging results, provider-patient communication holds even more importance, as providers need to proactively educate the patient about the unlikely relationship between their symptoms and imaging findings. It is unclear whether these conversations were had during previous provider-patient interactions in this case. Still, it can be inferred from the Veteran's subjective report that if they had in fact been discussed, the Veteran did not interpret the information as intended. This disconnect likely contributed to the development of harmful ideas and beliefs about his spinal pain as well.

We provided care based on our working diagnosis

of chronic non-specific low back pain derived from our clinical examination.¹⁹ The treatment plan was based on best practice guidelines and included active interventions such as exercise, activity advice, and education alongside manual spinal manipulation.¹⁹ Our clinical examination revealed signs of psychosocial risk factors, which were addressed throughout the trial of care using cognitive behavioral principles such as graded activity, pacing, sleep hygiene and hurt versus harm concepts.²⁰ Graded activity concepts were taught in the setting that the patient should steadily expose himself to specific activities that he was fearful of, as they have been painful in the past. In this case, it was the patient's gradual return to hunting without provocation of debilitating lower back pain. Pacing concepts work in tandem with graded activity, as the patient was encouraged to take intentional breaks during this new activity, to ensure he did not "burn and bust," doing too much too soon and feeling discouraged by his progress. Lastly, the provider informed the patient that it was normal and safe to experience mild discomfort (hurt) while re-engaging in meaningful activities, without fear of causing additional damage (harm) to his lower back. Active approaches to pain management (return to work, lumbar extension exercises, etc.) were always emphasized over passive interventions, such as rest or the need for additional manual therapy. Throughout the trial of care the Veteran demonstrated functional improvements as well as changes in his knowledge about CLBP (Table 1), including ways to modify his activities by pacing instead of discontinuing activities he enjoys. The authors suspect that his prognosis would have improved if these communication strategies had been utilized during his early interactions with healthcare providers.

Still, there remains the possibility that fear-inducing language was not used and the Veteran mis-interpreted the information, which makes a case for tools or strategies to evaluate the effectiveness of provider-patient interactions. The teach-back method has been proposed by Ha Dinh *et al.*²¹ as a simple tool used for this purpose, and has produced positive results in educating patients about disease-specific knowledge, adherence and self-care skills^{21,22}. While we did not use this specific tool in our case, it may be a useful method in healthcare settings to limit potential iatrogenic effects of provider language. In this case, the authors felt that it was important to implement various principles of cognitive behavioral therapies

to educate the patient about their condition at the time of their diagnosis. Healthcare providers should encourage and support movement early in their treatment plans so patients do not develop these maladaptive behaviors and beliefs.

Further information should be gathered surrounding patients' interpretation of common provider education with regards to low back pain. The specific language a provider chooses to use may directly influence patients' beliefs about their condition.¹³ For example, it has been reported that providing examples of activities that a patient should avoid leads to them interpreting their back as vulnerable and something that could be easily damaged.¹³ Even if health care providers do not explicitly state these ideas or beliefs, their communication with the patient may result in these beliefs and checks should be in place, such as teach-back, to ensure the intended message is received. Patients' own biases can also contribute to their interpretation of low back pain and its prognosis. Surveys conducted surrounding people's attitudes and beliefs about low back pain revealed people believe they need to protect their back and that it is easy to injure.^{23,24} These negative beliefs, which may contribute to the development of fear avoidance behaviors as well as low recovery expectations, are risk factors for the development of CLBP.²⁵ Thus, beliefs about low back pain associated with psychosocial risk factors can develop from patients' own thoughts as well as provider-patient interactions. It is our role as healthcare providers to screen for unhelpful thoughts, ideas or beliefs and develop effective communication skills to avoid contributing to the chronicity of low back pain.

Summary

This case is an example of prolonged disability due to the Veteran's unhelpful ideas and beliefs about their condition. It is the authors' interpretation of the Veteran's subjective history that such beliefs were shaped by previous interactions with early healthcare providers. Healthcare providers should be cognizant about the language that they utilize to describe a patient's CLBP diagnosis, limiting pathoanatomic explanations for pain, and implement tools, such as teach-back method, to assess patients' understanding of their condition. This case also gives one example of a treatment approach for a patient who exhibited unhelpful ideas or beliefs about their condition.

Although this is a single case report where conclusions cannot be drawn regarding the effectiveness of these treatment methods, it serves to demonstrate the potential impact providers can have to either positively or negatively influence beliefs surrounding CLBP.

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