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Improving patient understanding of low back pain in the primary care setting

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University of Vermont College of Medicine
Family Medicine Clerkship, August - September 2016
Castleton Family Health Center, Bomoseen, VT
Preceptor: Bradley A. Berryhill, MD
Community need

411 patients ages 20-98 were seen over a 365-day period for low back pain (LBP) at Castleton Family Health Center.

- Adults in their 5th and 6th decades of life were most commonly afflicted by LBP.
- 1/5 of patients who presented with LBP were under age 40.
Public health cost

- Up to 80% of individuals will experience LBP at some point in their lives\(^1\)
- LBP is the most common type of pain reported by U.S. adults across all age groups\(^2\) and is the leading cause of disability worldwide\(^3\)
- LBP results in 149 million lost work days and costs more than $100 billion in lost wages and productivity every year in the U.S.\(^4\)
- Vermont Chronic Care Initiative (VCCI), a cost-saving program that targets the top 5% of Medicaid users, who account for 39% of Medicaid costs, recognizes LBP as a chronic condition that may benefit from specialized care coordination\(^5\)
  - VCCI, which led to $30.5 million in health care savings in FY 2014, will only cost $2.6 million in FY 2017\(^5\)
“Last year I went to my doctor after having low back pain for several weeks. He referred me to the hospital for an x-ray, which showed arthritis at the base of my lower back. I received a referral for physical therapy . . . The education for my low back pain came from the physical therapist . . . I would benefit from input and education from my doctor. A little pamphlet focused on low back pain would be helpful before seeing a physical therapist in helping me learn what caused my low back pain and what I can do to alleviate it . . . Having a physically demanding job, I realize the need for me to maintain my health outside of work.”

Assistant Recreation Director at Rutland Healthcare & Rehabilitation Center

“Low back pain is a major problem, but people will not come to the library for information on it. They do their research online . . . Having a pamphlet at the doctor’s office will remind patients to bring up the issue with their doctor.”

Library Director of West Rutland Public Library

“The average patient that comes in with low back pain is in pain and frustrated and expects me to do something about it fast . . . They want Percocet, a quick fix . . . It would be good for people to understand how common low back pain is and how it’s preventable . . . I think it’s good to develop a brief, to-the-point educational objective that will get read and get people to get a better handle on what to expect if they seek treatment.”

Physician Assistant at Castleton Family Health Center
Proposed intervention

- Develop educational pamphlet on LBP that addresses the following:
  - What is LBP?
  - What causes LBP?
  - What are the warning signs of LBP?
  - How is LBP treated?
  - How do you prevent LBP?
- Provide copies of pamphlet in waiting areas and rooms
- Encourage patients with LBP to read pamphlet
- Encourage providers to discuss pamphlet with patients
Providers acknowledged that there had been no existing educational materials on LBP in the office and thought the pamphlet was helpful.

Patients with LBP found the pamphlet to be useful and easy to read.

**PATIENT INFO: LOW BACK PAIN**

By: Christine Lu, MS3

**What is low back pain?**
The low back is made up of the bottom portion of the spinal column and its supporting muscles. Low back pain (LBP), also known as lumbago, is a common complaint that can affect people of all ages. In fact, 8 out of 10 individuals will experience LBP at some point in their lives. The pain will usually go away on its own without treatment.

**Common causes of LBP:**
- INJURY from overuse, bad posture, or sudden twisting movements
- HERNIATED DISC: a cushion in the spinal column bulges out and pinches a nerve; can cause leg pain or “sciatica”
- DEGENERATIVE JOINT DISEASE: arthritis of the spine
- SPINAL STENOSIS: an abnormal narrowing of the spinal canal that leads to nerve compression; can cause leg pain with certain activities or postures

**When is imaging needed for LBP?**
A good history and physical exam are generally all your provider needs to determine the cause of LBP. X-rays and MRIs are often not necessary, unless your provider suspects something more serious might be going on or your symptoms do not improve in a few weeks.

**Let your provider know if you have any of the following:**
- Loss of strength or sensation in your legs
- Loss of bladder or bowel control
- Unintentional weight loss of 10 pounds or more in the past 6 months
- Cancer
- Osteoporosis
- Fever greater than 101°F
- Intravenous drug use
- Corticosteroid use
- Significant injury or trauma

**How is LBP treated?**

**SELF-CARE**
- Cold compresses (apply heat later)
- Light exercise and stretching
- Avoid prolonged bed rest

**MEDICINE (ask your provider about potential side effects)**
- Acetaminophen (Tylenol)
- Ibuprofen (Advil)
- Naproxen (Aleve)
- Muscle relaxants
- Spinal injections

**OTHER**
- Physical therapy
- Surgery (rarely)

**How to prevent LBP:**
- Maintain a healthy weight
- Practice good posture
- Lift with your legs, not your back
- Stretch before exercising
- Don’t smoke
Effectiveness & limitations

- The efficacy of the intervention may be assessed by asking patients to rate their understanding of LBP on a Likert scale before and after reviewing the pamphlet.
- An alternative strategy would be to ask patients to simply answer “yes” or “no” to whether they believe the pamphlet contributed to their understanding of LBP.
- The recurrence rate of LBP in patients who have read the pamphlet may be compared to that of the general patient population over a one-year period.
- It was not feasible to formally assess the efficacy of the intervention due to the short duration of the rotation.
Future interventions

- Distribute pamphlet to other health care facilities, public libraries, universities, and pharmacies in the community
- Develop a checklist to help providers stratify risk, increase diagnostic efficiency, minimize unnecessary imaging, and improve health care outcomes for patients presenting with LBP based on the following clinical features/criteria:
  - Age
  - Duration of pain
  - Significant injury or trauma
  - Limb weakness
  - Bladder/bowel incontinence, saddle anesthesia
  - Osteoporosis
  - Corticosteroid use
  - History of cancer, unexplained weight loss
  - Fever, infection
  - IVDU
  - Psychosocial needs
  - Prior imaging results
References


