The Prognosis of Acute Low Back Pain in Primary Care in the United States

A 2-Year Prospective Cohort Study

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Study Design. Prospective cohort study.

Objective. To assess the prognosis of patients presenting with acute low back pain (LBP) in a primary care setting in the United States.

Summary of Background Data. Practice guidelines for acute LBP based on return-to-work outcomes underestimate the development of chronic pain in the primary care setting. Because of differences in inclusion criteria, chronic pain definitions, and national health systems, prognostic cohort studies have reported a wide range of results limiting interpretation and generalization. Current data from carefully designed prognostic studies of acute LBP are lacking for the US primary care system.

Methods. Members of a large health service organization were enrolled after seeking medical care for acute LBP, with or without sciatica, of up to 30 days duration, with no episode in the past 12 months and no history of spine surgery. We conducted telephone interviews at baseline, 6 months, and 2 years. Based on receiver operating characteristic analyses, a combination of global perceived recovery with pain intensity was used as primary outcome for chronic pain. Recurrence and multiple secondary outcomes were assessed to allow for comparison with other studies.

Results. Six hundred five patients had an average pain intensity of 5.6 (numeric rating scale = 0–10) and disability of 15.8 (Roland-Morris scale = 0–24). Eight percent had declared sick leave between pain onset and baseline interview. Thirteen percent of 521 patients (86% follow-up) experienced chronic pain at 6 months and 19% of 443 patients at 2 years. At 6 months, 54% had experienced at least 1 LBP recurrence, and 47% in the subsequent 18 months.

Conclusion. The prognosis of strictly defined acute LBP, with or without sciatica, is less favorable than commonly stated in practice guidelines based on failure to return to work. Broad initiatives to develop new means for the primary and secondary prevention of recurrent and chronic LBP are urgently needed.

Key words: low-back pain, prognosis, acute pain, chronic pain.

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Using return to work as outcome, 6% to 10% of patients with acute low back pain (LBP) are expected to develop chronic pain.1–3 These patients consume up to 75% of LBP-related health care expenses in the United States,4 estimated at $26.3 billion in 19984 and even higher since.5

A recent systematic review of studies with patients of up to 8 weeks of acute LBP reported the proportion of patients failing to return to work as 11%, at both 3 to 6 months (range, 2%–20%) and 1 year (range, 9%–13%).7 Proportions of patients developing chronic LBP were higher in primary care studies, using outcomes of pain and function rather than return to work: 26% (range, 2%–48%) at 3 to 6 months.7 All included studies were conducted outside the United States except 1 study with 179 US patients that was published more than 20 years ago and had not excluded participants with chronic or recurrent LBP.1 These numbers are strikingly different from prognoses based on return to work.1

According to another systematic review of studies in patients with LBP of less than 3 weeks’ duration recruited from any kind of medical setting including specialty care, pain is expected to rapidly decrease by 58% (mean; range, 12%–84%) of initial levels within 1 month.3 Thereafter, pain continues to decrease more slowly, until 3 months, after which pain levels remain nearly constant.1 A similar course was seen for disability1 and in patients with sciatica included in only 1 study.3 The cumulative risk of at least 1 recurrence within 12 months was 73%.3

Another recent review reported that one-quarter to one-third of “acute” LBP patients had symptoms 6 to 12 months...
later,\textsuperscript{10} referencing 2 US studies that included participants with pain of up to 10 weeks’ duration\textsuperscript{11} and of any duration.\textsuperscript{12}

In summary, studies in primary care settings seem to indicate that the prognosis of acute LBP is not as favorable as claimed in clinical guidelines based on return to work.\textsuperscript{13} The wide range in the reported probability of a poor outcome may be explained by differences in outcome definitions, duration of pain at study enrollment, clinic setting, and insurance and compensation systems.\textsuperscript{7} Poor outcomes may be underestimated when based on return to work and overestimated in patients with a longer duration of LBP at study enrollment.

We sought to better define the prognosis of patients seen in a US primary care setting with acute LBP of well-defined duration, with and without sciatica. To permit comparability across LBP studies, we used 1 primary and multiple secondary outcome definitions of chronic LBP.

**MATERIALS AND METHODS**

**Design**

We conducted a prospective cohort study of acute LBP patients, using telephone surveys at baseline and follow-up assessments at 6 months and 2 years. The study was approved by the institutional review boards of the University of California, San Francisco, and Kaiser Permanente, Northern California.

**Participants**

We defined acute LBP as nonspecific pain in the lower back, with or without sciatica, severe enough to seek medical care and not preceded by any spine surgery ever or LBP in the past year. Initially, we attempted to recruit patients with pain of less than 2 weeks’ duration. However, we found that scheduling a clinic visit and being seen took more than 2 weeks from pain onset in so many patients that this criterion of “acuteness” threatened the study’s feasibility. Thus, for pragmatic reasons, we decided to include patients with LBP for up to 30 days.

Participants were members of a large integrated health system. From February 2008 to March 2009, a computer generated a daily list of 18- to 70-year-old primary care patients seen the day before for LBP. Patients were excluded if electronic medical records showed LBP in the preceding 12 months. The same day, an invitation letter was sent to these patients to contact the research team. A brochure briefly explained the study and offered a $20 gift card for each interview but, to minimize false reporting, did not disclose the LBP duration criterion. Respondents were included if they matched the criteria for acute LBP, spoke English, and had no fever, history of cancer, chronic inflammatory disease, fibromyalgia, chronic pain conditions, disabling psychiatric diseases, or ongoing prescriptions for narcotics prior to the LBP episode. The sample represented the socioeconomic and ethnic diversity of the population of health-insured adults in Northern California, with slight underrepresentation of both ends of socioeconomic status,\textsuperscript{14} and is described in Table 1.

### TABLE 1. Patient Characteristics (N = 605)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
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<td></td>
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<tr>
<td>Sex</td>
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<tr>
<td>Female</td>
<td>339</td>
<td>56</td>
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<tr>
<td>Ethnicity</td>
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<td>American Indian</td>
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<tr>
<td>Asian American</td>
<td>71</td>
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<tr>
<td>African American</td>
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<td>8</td>
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<tr>
<td>Latino American</td>
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<tr>
<td>Caucasian American</td>
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<td>Other/mixed/no answer</td>
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<td>8</td>
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<td>Foreign born</td>
<td>106*</td>
<td>18</td>
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<tr>
<td>Education</td>
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<td>Some high school</td>
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<td>High school</td>
<td>66</td>
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<td>Some college</td>
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<td>College degree</td>
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<td>≥Graduate school</td>
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<td>Combined household income in $</td>
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<td>10,000–24,999</td>
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<td>25,000–49,999</td>
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<td>22</td>
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<tr>
<td>≥150,000</td>
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<td>No answer</td>
<td>54</td>
<td>9</td>
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<td>Employment status</td>
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<tr>
<td>Full time</td>
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<tr>
<td>Part time</td>
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<td>13</td>
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<tr>
<td>No paid work, not seeking</td>
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<td>4</td>
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<tr>
<td>Retired</td>
<td>135</td>
<td>22</td>
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<tr>
<td>Lost days from work</td>
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<tr>
<td>0</td>
<td>178</td>
<td>30</td>
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<tr>
<td>1–2</td>
<td>128</td>
<td>21</td>
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<tr>
<td>3–30</td>
<td>135</td>
<td>23</td>
</tr>
<tr>
<td>NA</td>
<td>158</td>
<td>26</td>
</tr>
<tr>
<td>Ever on sick leave for prior episodes of LBP</td>
<td>148</td>
<td>24</td>
</tr>
</tbody>
</table>

(Continued)
TABLE 1. (Continued)

| Days of <50% of usual activity mean days (±SD) [median], range: 0–10 | N (±) | % |
|-----|-----------------|-----|-----|
| 8 (±7) | [7] |
| Duration of LBP at baseline interview, mean days (±SD) [median], range: 2–30 | 17 (±8) | [14] |

Days in bed since onset of pain

<table>
<thead>
<tr>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>269</td>
</tr>
<tr>
<td>1–2</td>
<td>124</td>
</tr>
<tr>
<td>3–4</td>
<td>113</td>
</tr>
<tr>
<td>5–10</td>
<td>71</td>
</tr>
<tr>
<td>11–21</td>
<td>22</td>
</tr>
</tbody>
</table>

*Mean years in the United States: 27 [range, 1–65].
LBP indicates low back pain; NA, not applicable.

Measures

The following self-reported clinical parameters were assessed at baseline: duration of current episode; history of prior episodes; pain-free interval before current episode; pain location(s); sciatica defined as pain extending below the knee; pain intensity by 11-point numeric rating scale (NRS) as average, worst, and most tolerable pain or average bothersomeness; McGill Pain Questionnaire; Roland-Morris (RM) Disability Questionnaire; and days on sick leave and of reduced daily activities. Identical questions were asked at 6-month and 2-year follow-up interviews, with the addition of a 6-point Likert scale for General Perceived Recovery (GPR) with answering options “fully recovered,” “much improved,” “slightly improved,” “same,” “slightly worse,” and “much worse.”

Outcome Definitions

No consensus exists for defining the outcome of chronic pain for cohorts with acute LBP at inception. According to qualitative studies, single parameters such as pain or disability are not easily translatable into perceived recovery or chronic pain.

Using receiver operating characteristic curves, Mehling et al. suggested a combined outcome criterion for studies of acute LBP requiring a binary outcome of recovery versus non-recovery. A combination of the GPR scale with a specific pain or disability level for patients self-classified as neither much improved nor worse (self-report as “slightly improved” or “same”) showed improved discrimination between recovered and chronic pain. The authors reported a cutoff of less than 3 for pain scores (and/or <4 for RM scores) as upper limits for recovery at follow-up for this combined criterion in the middle group and reported values for minimal important changes and minimal important percent changes compatible with perceived recovery.

Studies suggested a definition of chronic back pain based on multiple measures of pain and disability for the past 6 months, with grades II or higher defining “clinically significant chronic back pain.” Because at the 6-month assessment this definition would have included the onset of the episode itself, this criterion was applicable only at the 2-year follow-up.

We applied a primary chronic pain outcome definition on the basis of receiver operating characteristic curves. To allow for better comparison with other cohort studies, we analyzed our data according to additional secondary outcome definitions:

Primary definition of chronic LBP at follow-up: not at least “much improved” on GPR scale combined with pain intensity of 3 or more (11-point NRS) in patients perceiving themselves as neither much improved nor worse (“same” or “slightly improved”).

Secondary definitions of chronic LBP at follow-up are as follows:

- Not at least “much improved” (GPR) combined with disability of 4 or more (24-point RM) in patients perceiving themselves as neither much improved nor worse (“same” or “slightly improved”).
- Not at least “much improved” (GPR) combined with less than 64% pain improvement (NRS) in patients perceiving themselves as neither much improved nor worse (“same” or “slightly improved”).
- Not at least “much improved” (GPR).
- “Same” or “worse” (GPR).
- Pain intensity of 3 or more (11-point NRS).
- Disability of 4 or more (24-point RM).
- Pain and disability grade II or higher (Von Korff) at 2 years.

We used Stata 11 software (StataCorp LP; College Station, TX) for standard descriptive statistics. For the 2 follow-up assessments, participants’ binary classification of chronic pain recovered were compared by Bowker’s and Stuart-Maxwell tests.

RESULTS

Six hundred five patients fulfilled eligibility criteria and were interviewed within 30 days of a new-onset LBP episode. This represents 25% of the 2454 patients screened who responded to invitations mailed to 42,650 patients seen for any kind of LBP during the 12 months of recruitment. These patients sought medical care for considerable pain (mean intensity, 5.6; SD ± 1.8; median, 6) and disability (mean RM score, 15.8; SD ± 4.7; median, 17). By the time of the baseline interview, patients reported more than 50% reduced daily activity for an average of 8 days (SD ± 7) and 23% had lost 3 to 30 days from work or school (including 14 self-classified “unemployed,” 7 of whom were students, and 10 “retirees”), yet only 8% had declared sick leave (Tables 1 and 2).

Five hundred twenty-one patients (86%) completed a 6-month follow-up interview and 443 another interview at 2 years (73% from baseline, 85% from 6 months). Table 3 shows mean values for pain and disability at baseline and follow-up for each level of perceived recovery.

Depending on the definition used, 9% to 35% of this primary care cohort continued to have considerable symptoms.
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CLINICAL CASE SERIES

TABLE 2. Prognosis of Acute Low Back Pain in Primary Care

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 mo</th>
<th>2 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciatica (period before baseline interview; between interviews)</td>
<td>27%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>Sciatica (at day of interview)</td>
<td>10%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>&gt;50% reduced activity levels for at least 1 day in past week</td>
<td>92%</td>
<td>12%</td>
<td>35%</td>
</tr>
<tr>
<td>“Discomfoting” or worse (McGill)</td>
<td>79%</td>
<td>25%</td>
<td>32%</td>
</tr>
<tr>
<td>“Distressing” or worse (McGill)</td>
<td>39%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>“Horrible” or “excruciating” (McGill)</td>
<td>13%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Mean pain intensity (range, 0–10)</td>
<td>5.6 (±1.8)</td>
<td>1.2 (±2.0)</td>
<td>1.4 (±2.2)</td>
</tr>
<tr>
<td>Mean pain bothersomeness (range, 0–10)</td>
<td>6.5 (±2.3)</td>
<td>1.2 (±2.3)</td>
<td>1.4 (±2.2)</td>
</tr>
<tr>
<td>Mean pain intensity when most tolerable</td>
<td>2.6 (±1.8)</td>
<td>0.6 (±1.3)</td>
<td>0.8 (±1.6)</td>
</tr>
<tr>
<td>Mean pain intensity when worst</td>
<td>8.6 (±1.4)</td>
<td>2.2 (±3.0)</td>
<td>1.9 (±2.8)</td>
</tr>
<tr>
<td>Mean Roland-Morris score (range, 0–24)</td>
<td>15.8 (±4.7)</td>
<td>3.6 (±4.8)</td>
<td>4.4 (±5.4)</td>
</tr>
<tr>
<td>On sick leave for LBP</td>
<td>8%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

LBP indicates low back pain.

TABLE 3. Mean Values and Standard Deviation for Pain and Disability at Baseline, 6 Months, and 2 Years

<table>
<thead>
<tr>
<th></th>
<th>Average Pain</th>
<th>Worst Pain</th>
<th>Roland-Morris</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)*</td>
<td>Mean (SD)†</td>
<td>Mean (SD)‡</td>
</tr>
<tr>
<td>Total at baseline</td>
<td>605</td>
<td>5.4 (1.8)</td>
<td>8.5 (1.5)</td>
</tr>
<tr>
<td>Total at follow-up</td>
<td>521</td>
<td>443</td>
<td>6 mo</td>
</tr>
<tr>
<td>Completely recovered</td>
<td>169 (32)</td>
<td>142 (32)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Much improved</td>
<td>254 (49)</td>
<td>182 (41)</td>
<td>1.0 (1.6)</td>
</tr>
<tr>
<td>Slightly improved</td>
<td>51 (10)</td>
<td>51 (12)</td>
<td>3.0 (3.0)</td>
</tr>
<tr>
<td>Same</td>
<td>31 (6)</td>
<td>36 (8)</td>
<td>4.0 (2.6)</td>
</tr>
<tr>
<td>Slightly worse</td>
<td>9 (2)</td>
<td>24 (5)</td>
<td>4.0 (1.2)</td>
</tr>
<tr>
<td>Much worse</td>
<td>7 (1)</td>
<td>8 (2)</td>
<td>6.6 (1.8)</td>
</tr>
</tbody>
</table>

*Average pain: mean values for average pain in past week (range, 0–10).
†Worst pain: mean values for worst pain in past week (range, 0–10).
‡RM: Roland-Morris functional disability score (range, 0—24).
of 56) had recovered by 2 years and 63 of the 387 patients (16%), who were classified as recovered at 6 months, were now classified as chronic.

Recurrent pain was defined as a new episode of LBP with at least 1 pain-free week before that episode. Fifty-four percent of the patients (CI, 49%–58%) experienced at least 1 recurrence within the first 6 months, and 47% (CI, 42%–52%) of the patients experienced a recurrence between 6 months and 2 years (Table 4).

At 2-year follow-up, we applied the chronic pain severity grading suggested by Von Korff et al., and Von Korff and Miglioretti, which grade pain severity into 4 categories—

| TABLE 4. Chronic Pain Outcomes at 6 Months and 2 Years According to Various Definitions (95% Confidence Intervals) |
|--------------------------------------------------|----------------|----------------|
| **Primary outcome**                               | 6 mo           | 2 yr           |
| Defined as not at least “much improved”* and including “only slightly improved,”** with pain ≥3 of 10 (continuous or recurrent): (N = 70 of 521; 82 of 443) | 13% (10–16)    | 19% (15–22)    |

| **Secondary outcomes (see definitions in the text of the “Materials and Methods” section)** |
|--------------------------------------------------|----------------|----------------|
| Defined as “not improved” and including “only slightly improved,”** with disability ≥4 on 24-point Roland-Morris scale | 16% (13–19)    | 23% (19–27)    |
| Defined as “not improved” and including “only slightly improved,”** with pain <64% improved from baseline | 14% (11–17)    | 20% (16–24)    |

| **Additional outcomes of interest used in prior LBP studies** |
|--------------------------------------------------|----------------|----------------|
| Not “fully recovered”**                         | 68%            | 68%            |
| Pain intensity of ≥4 out of 10 average pain in past week | 15%            | 18%            |
| Bothersomeness of ≥4 out of 10                  | 19%            | 17%            |
| Roland-Morris score of ≥5                       | 30%            | 34%            |
| Roland-Morris score of ≥7                       | 22%            | 25%            |
| Roland-Morris score of ≥9                       | 14%            | 20%            |
| Pain more than willing to tolerate              | 18%            | 21%            |
| Pain “discomforting” or worse according to McGill | 25%            | 32%            |
| Pain <64% improved from baseline                | 26%            | 31%            |
| Recurrence of LBP in follow-up period (pain-free interval ≥1 wk) | 54% (49–58) | 47% (42–52) |

*Using a 6-point General Perceived Recovery scale with answering options “fully recovered,” “much improved,” “slightly improved,” “same,” “slightly worse,” and “much worse.”

†237 or 68% of “not fully recovered” and 40 or 8% of now “fully recovered” at 6 months; 277 or 54% of all.

‡93 or 31% of “not fully recovered” and 43 or 30% of now “fully recovered” at 2 years; 136 or 31% of all had a recurrence between 6 months and 2 years. LBP indicates low back pain.
As other cohort studies excluded patients with sciatica, we examined whether the inclusion of patients with sciatica at baseline (27%) affected the prognosis. The proportion of grade II severity (Von Korff) chronic LBP patients depended on the presence or absence of sciatica: 25% of the patients with sciatica at baseline suffered from grade II or higher severity at 2 years versus 17% without sciatica (odds ratio = 1.6; CI, 1.0–2.6). The corresponding proportions for the composite primary outcome were similar: 22% and 17%, respectively. Approximately two-thirds of the patients with chronic pain at 2 years (56 of 82) had sciatica at baseline.

DISCUSSION

Depending on the definition used, between 9% and 35% of this primary care cohort had clinically significant symptoms at 6 months and did not further improve in the subsequent 18 months. This, however, does not confirm prior reports’ findings that improvements in pain or disability that last more than 3 months are unlikely.1 Two-thirds of the patients, who were classified as having chronic LBP at 6 months, had recovered by the 2-year follow-up, whereas 16% of those, who at 6 months were classified as recovered, were classified as patients with chronic pain at 2 years. This may be explained by the high recurrence rate, namely, 47%, in the period between 6 months and 2 years and underscores the fluctuating and recurrent course of LBP after an episode of acute LBP. Recurrence or fluctuation, in turn, may explain the differences we observed for chronic pain classifications according to definitions that use a 6-month or 1-week recall.

All participants were seen exclusively in primary care clinics. Our study differed from other studies, such as a recent cohort study conducted in Australia,13 in which physical therapy or chiropractic offices were included in addition to primary care physician offices. We included patients with sciatica in our study if they were not scheduled for surgery. Sciatica was present in a quarter of patients at onset and improved in most cases. However, our data show that studies that exclude patients with sciatica are likely to present a better prognosis than our cohort.

Definitions for acute and chronic LBP used in prior research studies vary widely.24 Commonly, LBP is classified by its time course as a new-onset LBP of less than 4 or 6 weeks’ duration26 and chronic LBP as duration of more than 3 or 6 months. However, it has been argued that definitions based on duration alone are problematic and do not give appropriate justice to the often recurring and fluctuating clinical course.27–29 In this study, we used rigorous entry criteria for acute LBP: a first clinic visit within 1 month of onset, no history of LBP in the prior 12 months, and no history of spine surgery or other painful conditions. To our knowledge, no other studies with similarly stringent criteria for acute LBP in a primary care setting have been conducted in the United States in recent years.

As there is no consensus about appropriate outcome definitions for chronic pain, results among LBP studies lack homogeneity. Our study addresses that challenge by providing data for a primary outcome definition suggested previously18 and additional outcome definitions used in prior studies.

A limitation of this study is that we interviewed only those patients who responded to a mailed invitation letter. That letter included most of the eligibility criteria except pain duration and was sent to patients with many kinds of LBP, including chronic LBP, recurrent LBP, and upper back pain. To minimize false reporting, the eligibility criterion of specific pain duration was revealed only after the phone screening. Therefore, this inception cohort is a small proportion of all the patients seen for LBP of any length in that health maintenance organization setting during the time of enrollment. We do not have comprehensive information for the patients who did not respond to our invitation. We know, however, that (1) our patient sample was similar in key characteristics (age, sex, ethnicity, education, income) to the insured patients of that health maintenance organization according to membership surveys14 and (2) respondents were slightly older and slightly more likely to be female patients than nonrespondents, which is common for respondents in membership surveys of this health maintenance organization.14

Another limitation is loss to follow-up: 85% of the 6-month respondents followed up at 2 years. If patients feeling worse at 2 years were more likely to participate in the follow-up than those who had recovered, our finding that numerous outcomes were worse at 2 years than at 6 months could have been due to responder bias. However, such bias should have resulted in an increase of the proportion of chronic patients and not the absolute numbers of chronic patients, as we found in our study: 47 patients had not improved (“same” or “worse”) at 6 months, whereas 68 patients had not improved at 2 years (Tables 2 and 3). As shown in Table 5, of those 381 patients classified as recovered at 6 months, 37 needed to be reclassified as chronic at 2 years, whereas of the 82 patients classified as chronic at 6 months, only 19 were reclassified as recovered at 2 years. We suggest that this implies that in our study population, the general risk of a recurrence of LBP, even for people who felt they were recovered at 6 months, outweighs the chances of improvement for those who experienced chronic pain at 6 months.

TABLE 5. Change in Recovery and Chronic Pain Classification From 6 Months to 2 Years (N = 443)*

<table>
<thead>
<tr>
<th>At 2 yr</th>
<th>At 6 mo</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Recovered</td>
<td>324</td>
<td>63</td>
</tr>
<tr>
<td>Chronic</td>
<td>37</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td>82</td>
</tr>
</tbody>
</table>

*Bowker's test for table symmetry = 0.01; Stuart-Maxwell test for marginal homogeneity = 0.01.

As previously reported, the general risk of a recurrence of LBP, even for people who felt they were recovered at 6 months, outweighs the chances of improvement for those who experienced chronic pain at 6 months.
In conclusion, we conducted a prospective cohort study in a primary care setting and found that in our sample the patient-reported prognosis of a rigorously defined new episode of acute LBP, with or without sciatica, is less favorable than commonly stated in practice guidelines based on return to work. Only 8% of this population reported sick leave, and return to work was of minor importance in this population. Primary care outcomes based on patients’ self-report do not coincide with outcomes based on return to work. It seems that almost all patients employed prior to the onset of acute LBP return to work, but that working with ongoing symptoms and residual disability may be common.

Our results show that the proportion of patients with clinically significant chronic LBP at 6 months after the first onset of acute pain is not likely to diminish in the subsequent 18 months. Although two-thirds of those classified as chronic pain patients at 6 months may still experience recovery in subsequent months, the high recurrence rate maintains the proportion of chronic pain patients at the same level. This result underscores the urgent need for broad initiatives to develop new means for the primary and secondary prevention of recurrent and chronic LBP.

Key Points

- A prospective cohort study included 605 patients from a large health service organization who presented with acute LBP of up to 4 weeks in primary care clinics in the United States and were interviewed at baseline, 6 months, and 2 years.
- Patients had an average pain intensity of 5.6 (NRS: 0–10) and disability of 15.8 (RM scale: 0–24). Eight percent had declared sick leave between pain onset and baseline interview.
- Thirteen percent of patients had chronic pain at 6 months and 19% at 2 years.

References

24. Stata 11 [data analysis and statistical software]. College Station, TX: StataCorp LP; 2010.