ICPM
IMPROVING
CHRONIC PAIN
MANAGEMENT

Outcomes Report
2016

Jointly sponsored by the NYU Post-Graduate Medical School and DKBmed, LLC.
This study is supported in part by an independent medical education grant from Pfizer, Inc.
PROGRAM OVERVIEW

PURPOSE OF PROGRAM
To assess the impact of a medical education-based program on the use of pain scales in practices of clinicians seeing patients with chronic pain.

TARGET AUDIENCE
Primary Care clinicians (Family Practice, General Practitioner, Internal Medicine, Nurse Practitioner & Physician Assistant); Rheumatologists, Neurologists, OB-GYN, and other clinicians who treat patients afflicted by chronic pain within NYU.

LOCATIONS
The Miller Practice, NYU Langone Trinity Center, NYU Columbus Medical, Ambulatory, Tisch Center for Women’s Health, and Arnold and Marie Schwartz Health Care Center.

OUTCOMES MEASUREMENT
Pre-post pairwise comparison of responses in pain score use, as well as analysis based on lecture attendance. The IRB approved the use of a validated patient quality of life survey (“The Brief Pain Index”) before and after the program. Self-reflection/barrier survey sent following live lectures.
PROGRAM OBJECTIVES

LEARNING OBJECTIVES

• Describe the basic concepts of chronic pain, including taxonomy, epidemiology, and pathophysiology

• Integrate best practices in assessment of pain

• Apply strategies to monitor and optimize pain treatment

STUDY ENDPOINTS

• Primary: Increase the use of pain scores by clinicians

• Secondary: Improve patients’ healthcare related quality of life
PROGRAM DETAILS

COURSE DESCRIPTION
A multifaceted educational study to improve physician knowledge deficits, close key practice gaps, and remedy system deficiencies that result in suboptimal treatment of patients with chronic pain.
• Four 30-minute unique seminars presented to NYU Practice Group:
  • Introduction to pain
  • Pain assessment
  • Treatment of pain
  • Introduction to pain cases
• One on one Epic training session
  • Data on performance in practice re: use of pain scores
• RealCME virtual patient cases
  • Three patient cases first introduced in the live lectures
  • Level 5 outcomes

PATIENT QUALITY OF LIFE SURVEY
Quality of Life Survey (QOL) was administered prior to and following educational intervention.
• 154 surveys received before the education
• 126 surveys received following the education

MYDAILYPAIN MANAGER
• 31 patients currently subscribed to the app
INVESTIGATIVE COMMITTEE

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EDUCATIONAL COHORT

- 256 Clinicians were identified to participate in the study
- 152 Clinicians qualified to participate in study
- 64 Clinicians participated in the study

<table>
<thead>
<tr>
<th>Practice Location</th>
<th>Potential Attendees</th>
<th>Qualified Participants</th>
<th>Attendees</th>
<th>Affiliated Specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulatory Care</td>
<td>79</td>
<td>63</td>
<td>29</td>
<td>Neurology, PM&amp;R</td>
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<tr>
<td>Tisch Center for Women’s Health</td>
<td>14</td>
<td>8</td>
<td>8</td>
<td>Internist, Neurology, OB-GYN, Psychology</td>
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<tr>
<td>Trinity Hospital</td>
<td>18</td>
<td>11</td>
<td>7</td>
<td>Internal Medicine, OB-GYN, Orthopedics</td>
</tr>
<tr>
<td>Miller</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>Internal Medicine, OB-GYN</td>
</tr>
<tr>
<td>Schwartz Practice</td>
<td>51</td>
<td>28</td>
<td>8</td>
<td>Internal Medicine</td>
</tr>
<tr>
<td>Columbus Hospital</td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>Internal Medicine, OB-GYN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disqualified Practices</th>
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<tbody>
<tr>
<td>CMC</td>
<td>44</td>
<td>25</td>
<td>0</td>
<td>Rheumatologists</td>
</tr>
<tr>
<td>Hospital of Joint Disease</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>Orthopedics</td>
</tr>
<tr>
<td>Tisch Hospital</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>Hospitalists</td>
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RECRUITMENT TACTICS

• Conducted individual introduction meetings with practice directors
• Obtained convenient days, times, and lecture duration per practice
• Conducted kick-off meetings with study participants
  o Provided details regarding the study and expected responsibilities
• Email reminders sent week and day before lecture
• Tele-recruiting calls made to remind participants of upcoming lectures
• Email campaign to promote online enduring materials
## CHALLENGES/BARRIERS

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Resolution</th>
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<tbody>
<tr>
<td>Super storm “Sandy”</td>
<td>Rescheduled strategy and brainstorming meetings due to the shut down of NYULMC</td>
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<tr>
<td>Qualified participants</td>
<td>Contacted each practice to screen participants</td>
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<tr>
<td>Participation</td>
<td>Scheduled additional meetings with medical/administrative directors to engage them in the study</td>
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<td></td>
<td>Scheduled lectures around participants’ availability</td>
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<td>Grand rounds presentation scheduled for participant convenience</td>
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<td></td>
<td>Barrier surveys distributed to determine barriers to participation</td>
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<tr>
<td>Pay for Performance (P4P)</td>
<td>Create education that establishes realistic expectations of pain management and treatment</td>
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<tr>
<td>Presentation Skills/Availability</td>
<td>Coaching, selecting, and modifying faculty based on presentation skills</td>
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</table>
100% of clinicians felt that the program format was appropriate and most believed the activity was free from commercial bias.

- The activity was free of commercial bias: 97% Yes, 2% No
- Faculty disclosed when they discussed unlabeled or unapproved uses of drugs or medical devices: 58% Yes, 5% No
- Disclosure of relevant financial relationships of faculty were clearly communicated: 91% Yes, 3% No
- Disclosure of commercial support (if any) was clearly communicated: 82% Yes, 2% No
- Was the format of the activity appropriate for the educational activities listed? 100% Yes
Clinician knowledge improved by 18% immediately following the program.

N = 34,38
The yearly cost to the U.S. economy of chronic pain, including treatment and lost productivity is approximately: 76%

Which type of pain is caused by lesions or disease of the somatosensory nervous system? 56%

The four major steps in pain processing are: 39%

Clinician knowledge improved overall following the program. 71%
A patient who describes her pain as sometimes throbbing, sometimes achy, and well localized to the right hip has which type of pain?

Which of the following statements is FALSE?

How many of Waddell Signs must be positive to be considered clinically significant?

Clinician knowledge improved overall following the program.
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**Which of the following regimens is an example of the use of multimodal analgesia?**

- Pre: 26%
- Post: 87%

**Which of the following risk factors for opioid-induced respiratory depression include all of the following except:**

- Pre: 28%
- Post: 61%

**World Health Organization pain treatment ladder:**

- Pre: 34%
- Post: 62%

**Overall**

- Pre: 39%
- Post: 61%

N = 29, 23
Clinic knowledge improved overall following the program.

**Knowledge Results: Lecture 4**

- **Overall**
  - Pre: 90%
  - Post: 82%

- **When assessing pain, which of the following will be likely to elicit useful information from a patient about their pain:**
  - Pre: 97%
  - Post: 95%

- **An Important element of using opioids for chronic pain control is:**
  - Pre: 91%
  - Post: 81%

- **Which of the following statements about Fibromyalgia is FALSE?**
  - Pre: 83%
  - Post: 69%

N = 37, 35
EPIC EVALUATION AND TRAINING

Clinician ability to understand pain score and Epic use improved following the program.

Overall
- Pre: 26%
- Post: 74%

True or False: Intensity of pain should not be measured using a numeric rating scale.
- Pre: 67%
- Post: 91%

What reduction in the pain score is an indication of successful?
- Pre: 31%
- Post: 64%

The pain score is recorded in which chart in epic?
- Pre: 34%
- Post: 67%

Clinician ability to understand pain score and Epic use improved following the program.

N= 33,30
Clinicians’ confidence in managing patients with pain increased substantially as a result of the education.

1. Incorporate strategies to monitor and optimize pain treatment for your patients with chronic pain:
   - 28% Significant Increase
   - 43% Moderate Increase
   - 29% Slight Increase

2. Integrate best practices in pain assessment within your clinical practice:
   - 28% Significant Increase
   - 43% Moderate Increase
   - 29% Slight Increase

3. Apply the basic concepts of chronic pain, including taxonomy, epidemiology, and pathophysiology to your patients with chronic pain:
   - 29% Significant Increase
   - 43% Moderate Increase
   - 14% Slight Increase

N = 8

NYU School of Medicine
NYU Langone Medical Center
dkbmed
Apply the basic concepts of chronic pain, including taxonomy, epidemiology, and pathophysiology to your patients with chronic pain.

80% of clinicians rated their current knowledge of managing chronic pain was good to excellent as the result of participating in the study.
80% of clinicians indicate that they have/will change practice and 75% indicate they will enter patient pain scores into Epic more regularly.

Yes, a change has/will be implemented.

Yes, I use the Patient Pain Rating Scale and enter patient score in Epic more regularly.
PRACTICE CHANGE COMMENTS

• “I will document pain scores more consistently.” (n = 9)
• “I will fill in pain scores in the vital sign section.”
• “Established an Epic routine to track pain.”
• “I will use the pain scale with my patients more often.”
• “Become more attuned to my patients and now ask about pain.”
• “MyDailyPainManager.org will be recommended to my patients.”
• “I will have medical assistant ask patients about pain symptoms while they are taking vital signs.”
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PROGRAM IMPACT
Pre-Post Data Availability

- Available: 30%
- Unavailable: 70%

Lecture Attendance

- No lectures (control group): 30%
- 1 Lecture: 30%
- 2 Lectures: 10%
- 3 Lectures: 5%
- 4 Lectures: 2%
- 5 Lectures: 2%

Control group: 18
Participant: 42

N = 86, 60
Clinicians significantly increased their use of pain scores.

Frequency Using Pain Scores

- Pre: 20%
- Post: 45%

p < 0.001

N = 60
Despite high variation, there is no statistical difference between practices.
EFFECT OF LECTURE ATTENDANCE

The data suggests that lecture attendance leads to increased use of pain scores; statistical significance may be achieved with more participants.

\[ d = 0.5, \text{medium} \]

N = 18, 42
PRACTICE CHANGE
COMMENTS

• “I am now better able to classify a patient’s pain as acute or chronic pain.” (n = 4)
• “I will use pain scales more consistently.” (n = 3)
• “I have a better understanding of using the multimodal approach to treating pain.” (n = 3)
• “This has given me a better understanding of different classes of pain medication.” (n = 3)
• “Now, I am better able to plan stages in treatment and pain management.” (n = 3)
• “I am better now about being able to talk to my patients and educate them about pain.” (n = 2)
Patients report a significant decrease in the impact of pain on daily tasks including walking and work.
PROGRAM IMPACT: ENDURING
Clinicians improved along each learning objective.

- **Apply strategies to monitor and optimize pain treatment**: 67% to 84% (p=0.05)
- **Describe the basic concepts of chronic pain, including taxonomy, epidemiology, and pathophysiology**: 38% to 89% (p < 0.001)
- **Integrate best practices in assessment of pain**: 63% to 82% (p > 0.05)

N = 22, 22
On average, clinicians’ confidence in their ability to assess the impact and management of chronic pain increased following the program.

- **Case 1: Chronic Back Pain**
  - Pre: 3.48
  - Post: 3.9
  - p < 0.01

- **Case 2: Chronic Foot Ulcer**
  - Pre: 3.91
  - Post: 3.82
  - p > 0.05

- **Case 3: Widespread Chronic Pain**
  - Pre: 3.75
  - Post: 4.13
  - p > 0.05

N = 60, 60
SUGGESTED FUTURE CONSIDERATIONS

• Provide the education in shorter lectures with a narrowed scope to include only *measurable educational objectives*

• Designate a Program Champion at each location responsible for encouraging attendance at live meetings

• Generate improved clinician participation by increasing competition between locations

• Actively recruit Medical Assistants and other clinical staff to participate in the education because they play a critical role in patient care

• Change the focus of the program to measure improvement of patient function and QoL
CONCLUSIONS

60 clinicians at 6 facilities show marked and significant (p<0.001) improvement in their usage of pain scores, knowledge, and confidence in treating chronic pain. Clinicians increased the use of pain scores by at least 24% overall.

After attending at least one lecture, participants improved their use of pain scores by at least 28%. Although it is not significant (p>0.05), a medium effect size (d=0.5) suggests that attending at least one lecture improves pain score use; a larger sample may result in a statistically significant difference.

The improvement in the use of pain scores by clinicians who did not attend any lectures (13%) suggests that the effects of education influences not only the participants, but also their colleagues.

Clinicians also indicate that they will now “educate their patients on pain” and utilize pain scales more often.

31 patients are currently subscribed to the MyDailyPain Management tool.