

# Interpreting the Effectiveness of Opioids and Pregabalin for Pain Severity, Pain Interference, and Fatigue in Fibromyalgia Patients.

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## Abstract

### OBJECTIVE:

To evaluate the effectiveness of opioids and/or pregabalin on patient-reported outcomes among fibromyalgia (FM) patients based on levels of improvement.

### METHODS:

A total of 1,421 FM patients were identified with 3,082 observational periods of opioids with or without pregabalin use between April 2008 and February 2015. Patients were categorized by opioids, and pregabalin with and without opioids; opioids were designated by morphine equivalent dose (MED) of  $\leq 20$  (low MED),  $>20$  to  $<100$  (moderate MED),  $\geq 100$  (high MED), and pregabalin dosages  $\leq 150$ mg, 151- 300mg, and 301-450mg. Proportions of patients meeting clinically relevant thresholds of  $\geq 30\%$  and  $\geq 50\%$  improvement for pain interference (Ability to enjoy life; Activity; Mood; Relationships; Sleep), pain severity, and fatigue were compared among treatments, and area-under-the-curve (AUC) for improvement and worsening of effects was determined, enabling ranking of treatments. Further analysis compared pregabalin dosages.

### RESULTS:

Pregabalin without opioids resulted in the highest proportions of patients with  $\geq 30\%$  improvement on all pain items and pain interference with "Ability to enjoy life," "Activity" "Mood," and "Sleep." For the  $\geq 50\%$  threshold, pregabalin alone was highest for all pain interference items and for "Average pain" and "Worst pain." Pregabalin was consistently lowest across thresholds for fatigue, but showed better results combined with moderate MED opioids. Pregabalin dosages recommended for treatment of FM (151-450mg) generally resulted in the highest proportion of patients achieving thresholds relative to opioids. The AUC results were consistent with thresholds; pregabalin without opioids resulted in the greatest benefits with regard to improvement, with the highest ranking for overall improvement and overall effects.

### CONCLUSION:

Pregabalin without opioids provided the most favorable outcomes overall based on  $\geq 30\%$  and  $\geq 50\%$  improvement thresholds and AUC, with support for moderate MED opioids+pregabalin in patients suffering from fatigue. While most patients took less than recommended pregabalin doses, higher doses may lead to improved outcomes. This article is protected by copyright. All rights reserved.

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PMID:29064627

DOI:[10.1111/papr.12651](#)