

# Evolution of a National VA Chronic Pain Cohort: Defining Chronic Pain in Administrative Data

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# Chronic Pain Affects 100 Million Americans and Costs Exceeds \$560 Billion

ABOUT THE IOM

REPORTS

ACTIVITIES

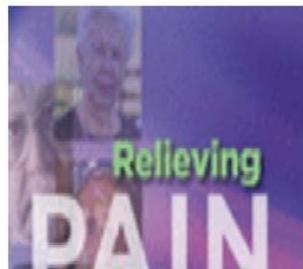
MEETINGS

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Report

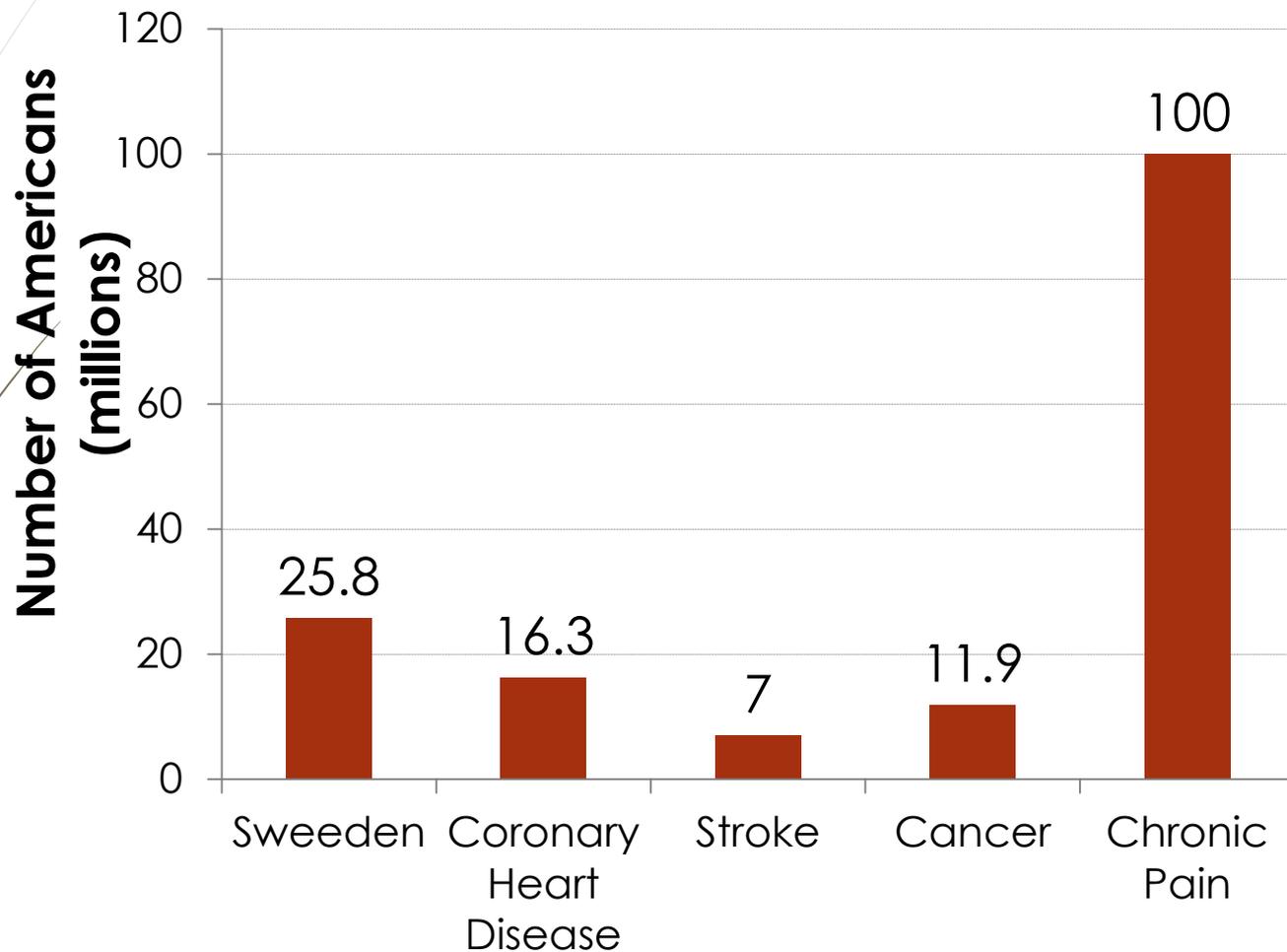


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Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research

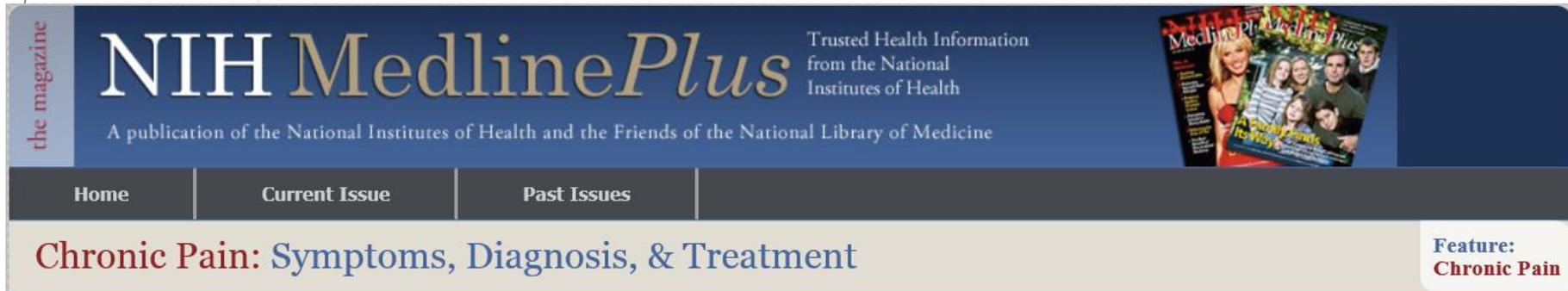
# Chronic Pain is a leading Public Health Issue in the US





- Pain Telementoring – Pain Specialists providing education for Primary Care Providers
- The Office of Specialty Care wants to know: Is this training program effective?
  - Which Veterans should it effect?

# Chronic Pain is Difficult to Define



The screenshot shows the NIH MedlinePlus website banner. On the left, it says "the magazine" vertically. The main title is "NIH MedlinePlus" in a large, serif font. To the right of the title, it says "Trusted Health Information from the National Institutes of Health". Below that, it says "A publication of the National Institutes of Health and the Friends of the National Library of Medicine". On the far right, there is a small image of the magazine cover. Below the banner, there is a navigation bar with three buttons: "Home", "Current Issue", and "Past Issues". Below the navigation bar, there is a main heading: "Chronic Pain: Symptoms, Diagnosis, & Treatment". On the right side of this heading, there is a small box that says "Feature: Chronic Pain".

the magazine

NIH MedlinePlus

Trusted Health Information  
from the National  
Institutes of Health

A publication of the National Institutes of Health and the Friends of the National Library of Medicine

Home Current Issue Past Issues

Chronic Pain: Symptoms, Diagnosis, & Treatment

Feature:  
Chronic Pain

- Chronic Pain Syndrome: ICD9 - 338.2
- Pain lasting beyond the expected healing time for an injury
- Pain Lasting longer than 3 (or 6) months
- Pain without an underlying identified injury



# Chronic Pain based on Surveys

- ▶ IOM Report: 100 million Americans in Chronic Pain
  - ▶ “Severe or moderate pain that interfered with ability to do work or household chores in previous 4 weeks”
- ▶ Nahin 2015
  - ▶ Based on National Health Interview Survey
  - ▶ 126 million Americans reported some pain in past 3 months
  - ▶ 25 million Americans (11.2%) reported daily (chronic) pain



- What Veterans should I expect this program to impact (who should I be studying)?
- How can I identify them from administrative data sources?



# QUERI's and PhD's

- ▶ Triple Aim QUERI
    - ▶ Construct a National Cohort of Veterans suffering from Chronic Pain
    - ▶ Examine variation in Multi-modal Pain Care at the Facility Level
    - ▶ Implement Pain SCAN-ECHO training at outlier facilities in a controlled fashion
  - ▶ Aligned dissertation work to studying national chronic pain care and outcomes in the VA
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# We Need a Chronic Pain Administrative Data Definition

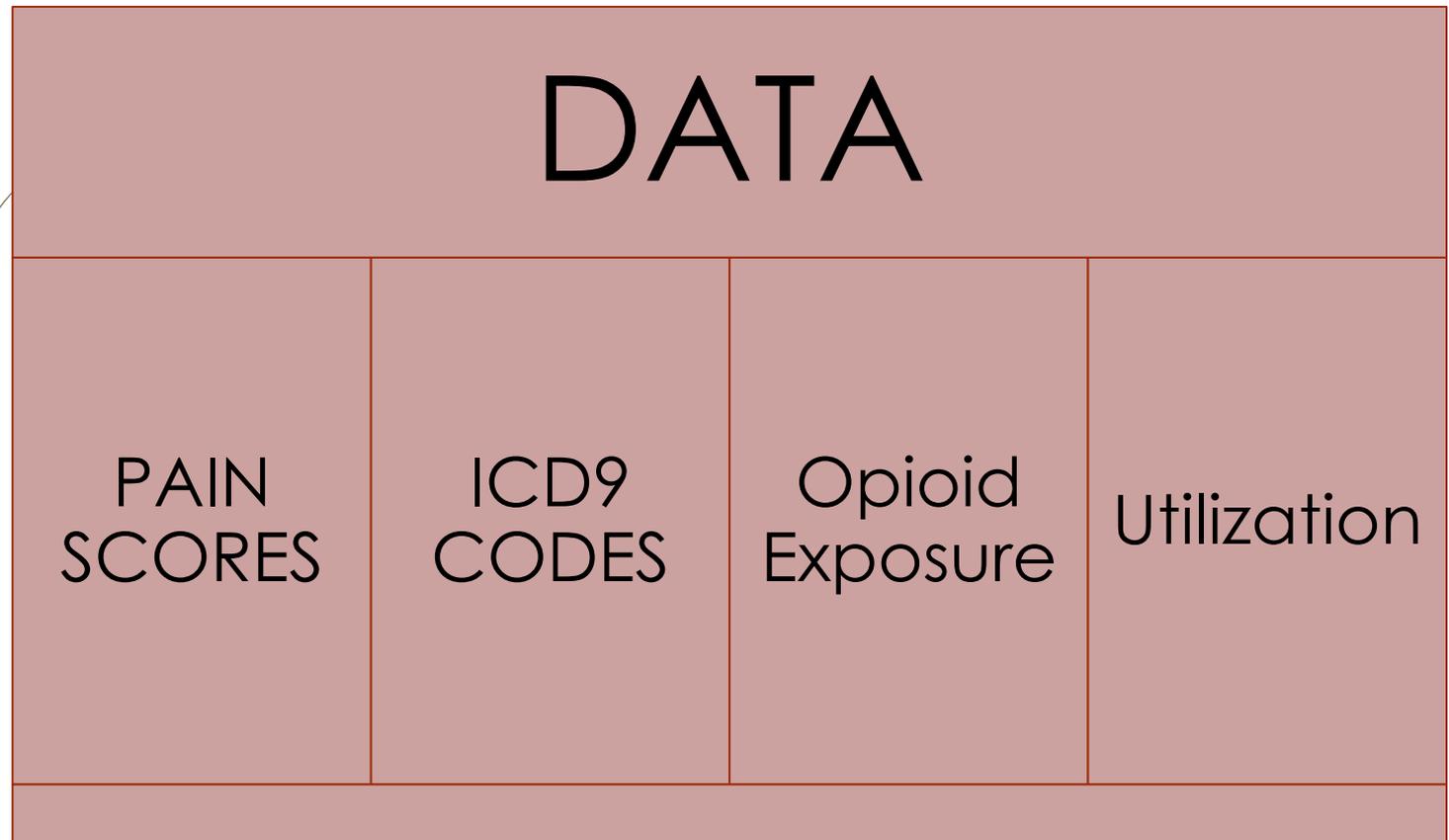
- ▶ What is the prevalence of chronic pain in the VA system?
- ▶ What is the burden of chronic pain in the VA system?
- ▶ What are the needs of Veterans with XYZ on chronic pain?
- ▶ What are the needs of Veterans experiencing chronic pain?

All Veterans

Veterans Experiencing Chronic Pain



# How Might We Define Chronic Pain in Administrative Data?





# Chronic Pain and Pain Scores

- ▶ Haskell et al Clin J Pain 2012
  - ▶ VA data 2001-2009
  - ▶ 153,212 OEF/OIF Vets
  - ▶ 3 or more pain scores  $\geq 4$  in 3 different months  
“persistent Pain”
  - ▶ Of 16,611 Veterans with at least 3 available pain scores, ~20% Had Persistent Pain
- ▶ Frank et al 2015
  - ▶ 3 or more pain scores  $\geq 4$  in 3 different months
  - ▶ ~1.2 million Veterans with any pain score  $\geq 4$
  - ▶ ~375,000 Veterans with chronic pain



# Chronic Pain Based on ICD9

- ▶ Lamerato 2015 (non-VA)
  - ▶ Henry Ford Health System
  - ▶ 25 pain conditions of interest identified by icd9 codes
  - ▶ First encounter with diagnosis was baseline
  - ▶ Chronic pain defined as 2 or more visits for a pain condition > 30 days apart and < 365
  - ▶ Of 127,317 patients, 14,784 (11.6%) met definition of Chronic Pain
- ▶ Edlund 2011 (VA Study)
  - ▶ Two clinical encounters for CNCP conditions > 30 days apart and > 365 days apart
  - ▶ ~1.4 million Veterans per year met chronic pain criteria
  - ▶ ~5.6 million Veterans used VA in 2010, ~25%?



# Chronic Pain and Opioids



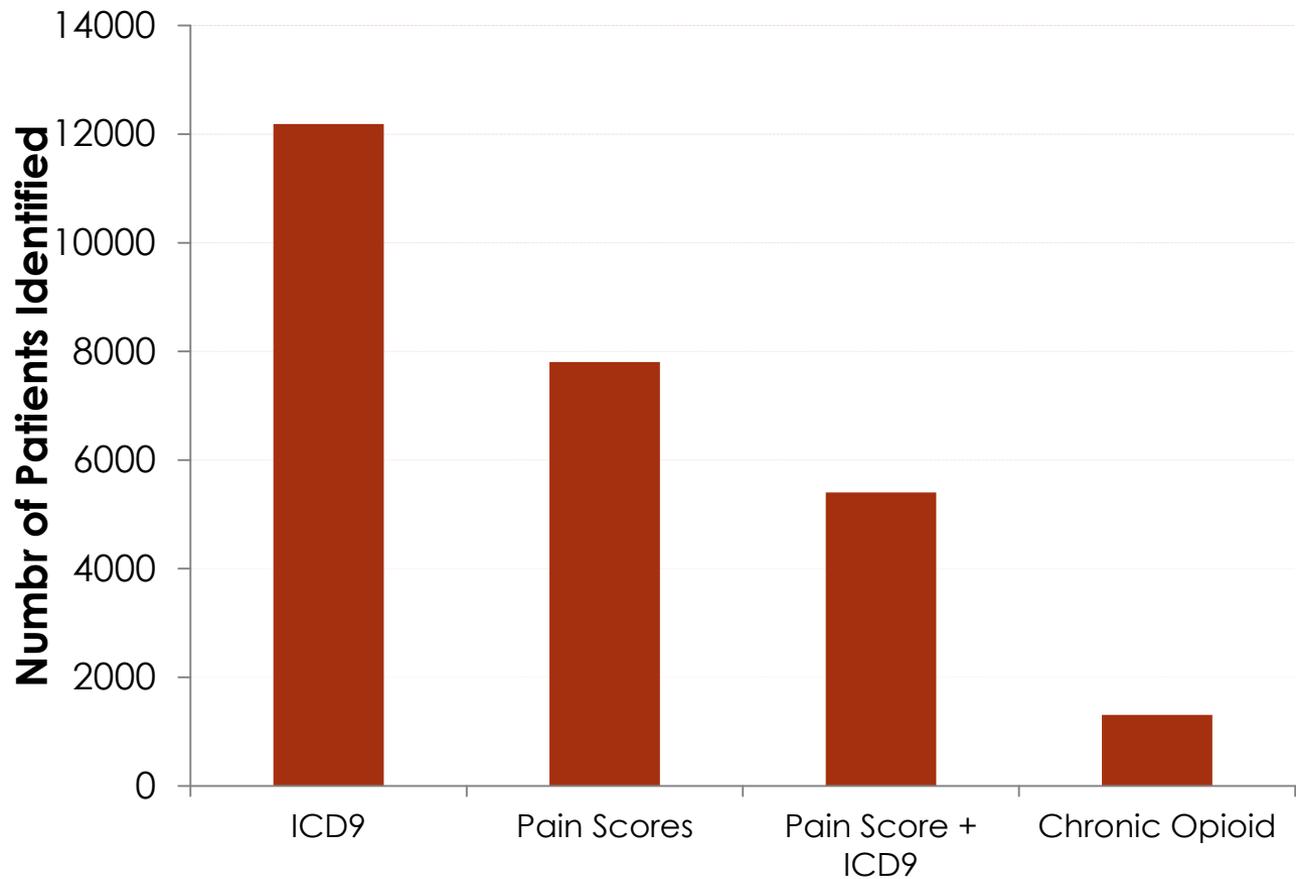
- ▶ Seal 2012
  - ▶ 141,000 Iraq/Afghanistan Veterans with at least 1 Non-cancer pain diagnosis
  - ▶ Examined Opioid prescriptions, high risk opioid use, and adverse outcomes. ~11% received opioids
- ▶ Sullivan 2008: TROUP Study
  - ▶ Examined Patients with common non-cancer chronic pain conditions
  - ▶ Identified Patients Receiving opioids
  - ▶ “Likely receiving opioids for chronic non-cancer pain”

# Using electronic health records data to identify patients with chronic pain in a primary care setting

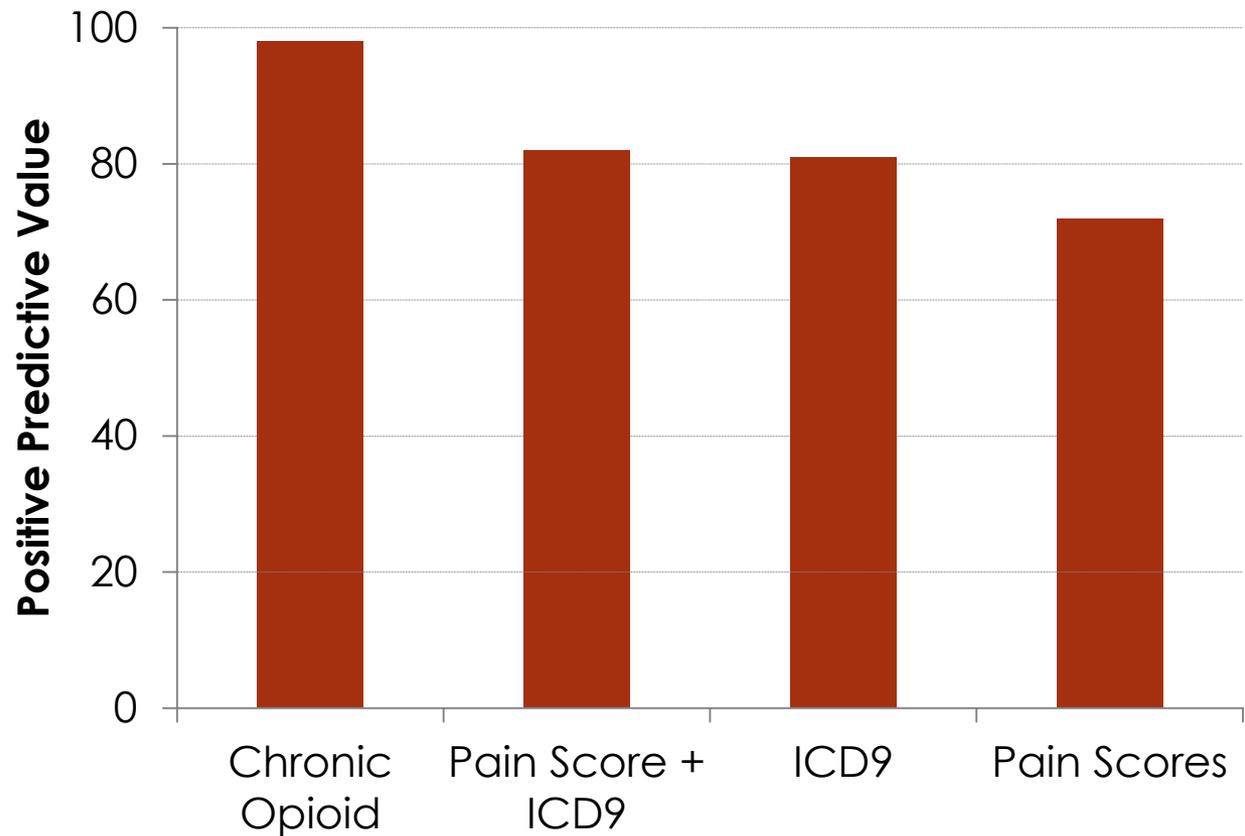
Terrence Y Tian, Ianita Zlateva, Daren R Anderson

- 38,520 patients in community health setting
- Chronic Pain: “Non-cancer Pain that is continuous and persistent for more than 90 days”
- ICD9 Codes – “Potential Chronic Painful Conditions”, at least one visit
- Opioid Exposure – 90+ days opioid exposure
- Pain scores – 2 or more pain scores  $\geq 4$

# ICD9 Codes Identify the Most Patients



# Chronic Opioid Exposure has the Highest PPV

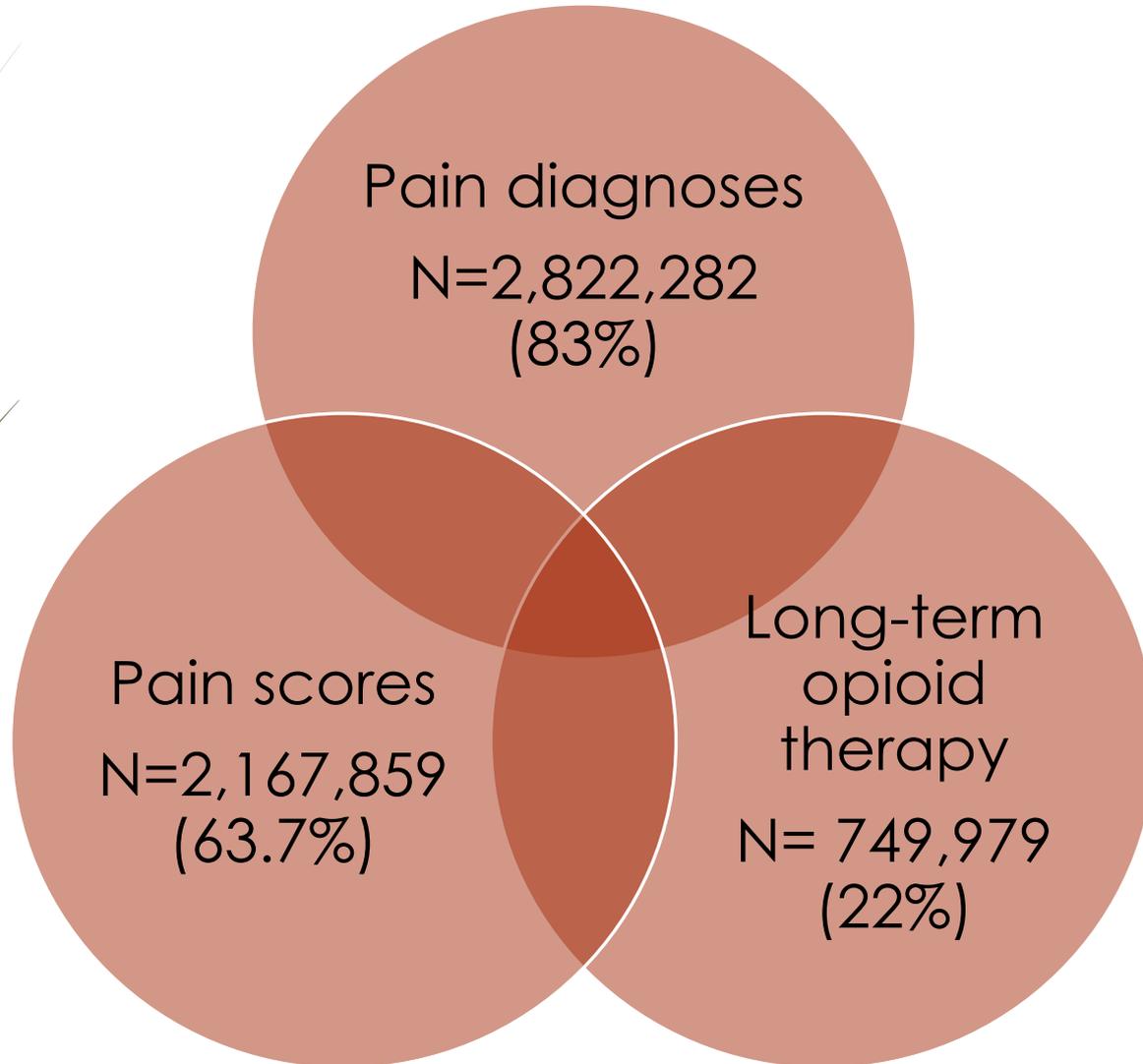




# Initial Research Questions

- ▶ How many Veterans report persistently elevated pain scores?
  - ▶ How many Veterans are diagnosed with conditions likely related to chronic pain?
  - ▶ How many Veterans are exposed to long term opioid therapy?
  - ▶ What is the overlap in these estimates?
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Total Number Patients = 3,403,205





Pain + Dx  
N=1,171,782 (34.4%)

Pain diagnosis only  
N=1,053,796 (30.1%)

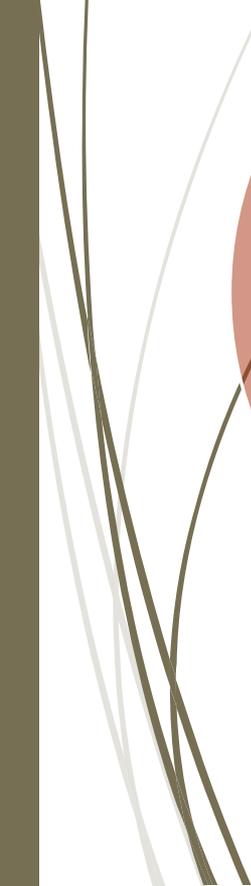
Dx + LTOT  
N=106,908 (3.1%)

Pain scores only  
N=427,648  
(12.6%)

Long-term opioid  
therapy only  
N=74,642 (2.2%)

Dx + Pain + LTOT  
N=489,796 (14.4%)

Pain + LTOT  
N=78,633 (2.3%)





# Acknowledgements

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  - ▶ Denver Triple Aim Query Team
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