



# PROJECT STEP



Application of a mixed qualitative and quantitative approach to inform and evaluate implementation of the VHA's Stepped Care Model of Pain Management at VA Connecticut

Program for Leadership  
Donaghue Medical Research Foundation and Mayday Fund

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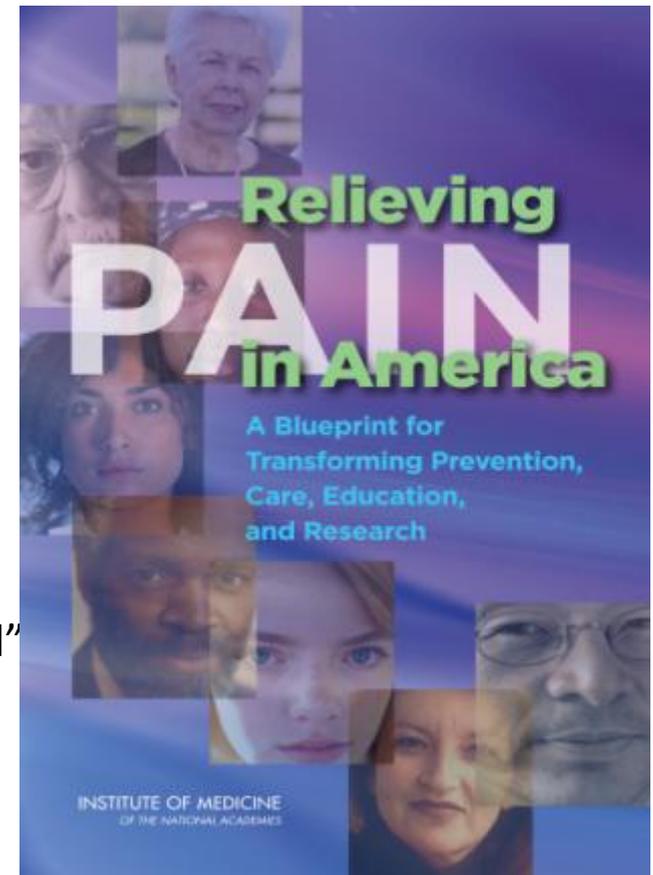
# Learning Objectives

- The learner will be able to:
  - Describe the public health significance of chronic pain
  - Describe the VHA's Stepped Care Model of Pain Management (SCM-PM)
  - Describe several initiatives at the VA Connecticut Healthcare System to support implementation of the SCM-PM
  - Describe the mixed methods approach that was employed in Project STEP to inform and evaluate implementation of the SCM-PM at VA Connecticut

# Polling question about characteristics of participants

# Care of People with Pain: Findings of the IOM

- **Pain care must be tailored to each person's experience**
  - Financing, referrals, records management need support this flexibility
- **Significant barriers to adequate pain care exist**
  - Gaps in knowledge and competencies for providers
  - Magnitude of problem
    - Half of primary care providers report feeling only “somewhat prepared”, 27% report feeling “somewhat unprepared” or “unprepared”
    - Inadequacies in subspecialty training
  - Systems and organizational



# Barriers to Effective Pain Care

- **System-level barriers**
  - Institutional
  - Educational
  - Organizational
  - Reimbursement-related
- **Clinician-level barriers**
  - Evidence-based guidelines on assessment and treatment
  - Adequate pain education
  - Clinician collaboration
  - Policies on appropriate use of opioids
  - Insurance coverage
- **Patient-level barriers**
  - Awareness of pain
  - Insurance coverage
  - Concern of opioids use and addiction



*"I'm going to prescribe something that works like aspirin but costs much, much more."*

# Care of People with Pain

## Recommendations

- **3-1. Health care provider organizations should promote and enable self-management of pain as the starting point of management**
- **3-2. Population strategy described in Recommendation 2-2 should include developing strategies to overcome barriers to care**
- **3-3. Health professions education and training programs, professional associations, and other groups should provide educational opportunities in pain assessment and treatment in primary care**
- **3-4. Pain specialty professional organizations and primary care professional associations should support collaboration between pain specialists and primary care clinicians, including greater proficiency by primary care providers along with referral to pain centers when appropriate**
- **3-5. Payers and health care organizations should revise reimbursement policies to foster coordinated and evidence-based pain care**
- **3-6. Health care providers should provide consistent and complete pain assessments**

# Pain Management is a priority for VHA

- As many as 50% of male VHA patients in primary care report chronic pain (Kerns et al., 2003; Clark, 2002)
- The prevalence may be as high as 75% in female Veterans (Haskell et al., 2006)
- Pain is among the most costly disorders treated in VHA settings; total estimated cost attributable to Veterans with low back pain was \$2.2 billion in FY99 (Yu et al., 2003)
- Number of Veterans with chronic low back pain is growing steadily (Sinnott & Wagner, 2009)

# Concomitants of persistent pain

- Pain is associated with:
    - poorer self-rating of health status,
    - greater use of healthcare resources,
    - more tobacco use, alcohol use, diet/weight concerns,
    - decreased social and physical activities,
    - lower social support,
    - higher levels of emotional distress, and
    - among women, high rates of military sexual trauma.
- (Kerns, Otis, & Rosenberg, 2003; Haskell, Papas, Heapy, Reid, & Kerns, 2008)

# Frequency of Diagnoses<sup>1</sup> among Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND) Veterans

Diagnosis (Broad ICD-9 Categories) <sup>a</sup>	Frequency	Percent <sup>b</sup>
Infectious and Parasitic Diseases (001-139)	144,167	16.0
Malignant Neoplasms (140-209)	13,016	1.4
Benign Neoplasms (210-239)	64,424	7.2
Diseases of Endocrine/Nutritional/ Metabolic Systems (240-279)	302,719	33.6
Diseases of Blood and Blood Forming Organs (280-289)	36,899	4.1
Mental Disorders (290-319)	486,015	54.0
Diseases of Nervous System/ Sense Organs (320-389)	415,543	46.2
Diseases of Circulatory System (390-459)	198,140	22.0
Disease of Respiratory System (460-519)	241,229	26.8
Disease of Digestive System (520-579)	326,338	36.3
Diseases of Genitourinary System (580-629)	142,687	15.9
Diseases of Skin (680-709)	199,803	22.2
<b>Diseases of Musculoskeletal System/Connective System (710-739)</b>	<b>519,721</b>	<b>57.8</b>
Symptoms, Signs and Ill Defined Conditions (780-799)	478,267	53.2
Injury/Poisonings (800-999)	267,407	29.7

<sup>1</sup>Includes both provisional and confirmed diagnoses.

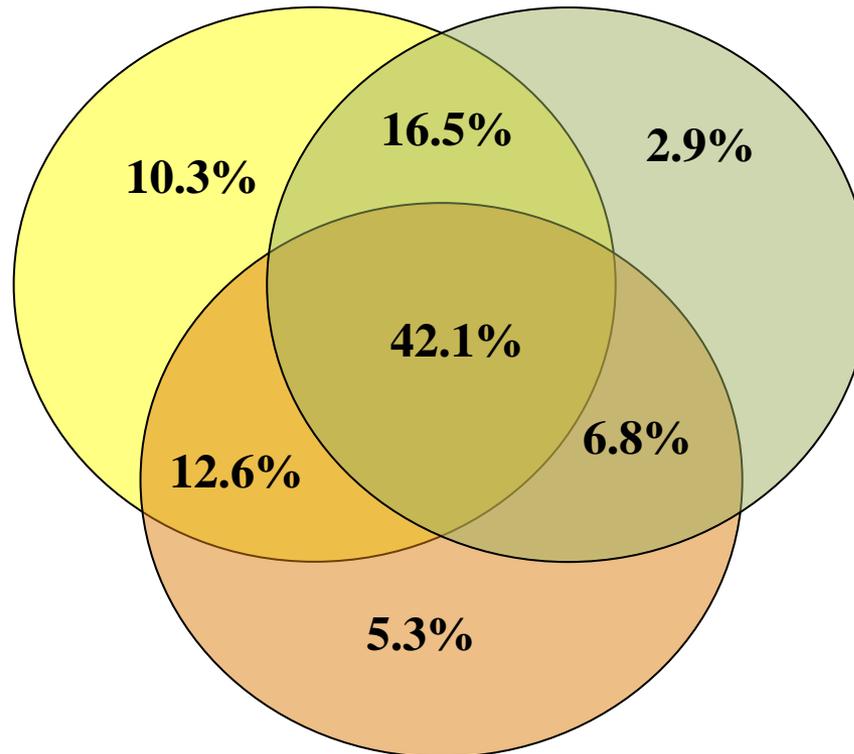
<sup>a</sup>These are cumulative data since FY 2002, with data on hospitalizations and outpatient visits as of September 30, 2011; Veterans can have multiple diagnoses with each health care encounter. The total may be higher than 899,752 unique Veterans because a Veteran can have more than one diagnosis and each is entered separately in this table.

<sup>b</sup>Percentages reported are approximate due to rounding.

# Prevalence of Chronic Pain, PTSD and TBI: sample of 340 OEF/OIF veterans

**Chronic Pain**  
N=277  
81.5%

**PTSD**  
N=232  
68.2%



**TBI**  
N=227  
66.8%

Lew et al., (2009). Prevalence of Chronic Pain, Posttraumatic Stress Disorder and Post-concussive Symptoms in OEF/OIF Veterans: The Polytrauma Clinical Triad. *Journal of Rehabilitation Research and Development*, 46, 697-702.

# VHA Pain Management Directive

- Objectives of National Pain Management Strategy
- Pain Management Infrastructure
  - Roles and responsibilities
- Stepped Pain Care Model
- Pain Management Standards
  - Pain assessment and treatment
  - Evaluation of outcomes and quality
  - Clinician competence and expertise



# National Pain Management Strategy

Objective is to develop a comprehensive, multicultural, integrated, system-wide approach to pain management that reduces pain and suffering for Veterans experiencing acute and chronic pain associated with a wide range of illnesses, including terminal illness.



# Empirical foundations

Cleeland, C.S., Schall, M., Nolan, K., Reyes-Gibby, C.C., Paice, J., Rosenberg, J.M., Tollett, J.H., & Kerns, R.D. (2003). Rapid improvement in pain management: The Veterans Health Administration and the Institute for Healthcare Improvement Collaborative. *Clinical Journal of Pain, 19*, 298-305.

Kerns, R.D. (2007). Research on pain and pain management in the Veterans Health Administration: Promoting improved pain care for veterans through science and scholarship. *Journal of Rehabilitation Research and Development, 44*, vii-x.

Kerns, R.D. & Dobscha, S.K. (2009). Pain among Veterans returning from deployment in Iraq and Afghanistan: Update on the Veterans Health Administration pain research program. *Pain Medicine, 10*, 1161-1164.

Kerns, R.D. (2013). Transforming pain care in the Department of Veterans Affairs: The role of the VA Pain Research Network (Editorial). *Clinical Journal of Pain, 29*, 93-94.

Kerns, R.D., Philip, E.J., Lee, A., & Rosenberger, P.R. (2011). Implementation of the Veterans Health Administration National Pain Management Strategy.

<sup>13</sup>*Translational Behavioral Medicine, 1*, 635-643.

# Veteran-Centered Pain Management

- Informed by chronic illness model
- Emphasis on team based integrated care
- Empowering Veterans through reassurance, encouragement and education
- Conservative use of analgesics and adjuvant medications
- Promotion of regular exercise and healthy and active lifestyle
- Development of adaptive strategies for managing pain



# VA Stepped Pain Care

RISK

Comorbidities

Treatment Refractory

Complexity

**Tertiary, Interdisciplinary Pain Centers**  
Advanced pain medicine diagnostics & interventions; CARF accredited pain rehabilitation

STEP 4

**Secondary Consultation**  
Multidisciplinary Pain Medicine Specialty Teams; Rehabilitation Medicine; Behavioral Pain Management; Mental Health/SUD Programs

STEP 3

**Patient Aligned Care Team (PACT) in Primary Care**  
Routine screening for presence & severity of pain; Assessment and management of common pain conditions; Support from MH-PC Integration; OEF/OIF, & Post-Deployment Teams; Expanded care management ; Pharmacy Pain Care Clinics; Pain Schools

STEP 2

**Self Care**  
Nutrition/weight management, exercise/conditioning, & sufficient sleep; mindfulness meditation/relaxation techniques; engagement in meaningful activities; family & social support; safe environment/surroundings

STEP 1

# Polling Question:

What is your involvement in efforts to implement the SCM-PM in VHA?

- Involved in national SCM-PM transformative efforts
- Member of VISN and/or Facility leadership team responsible for implementation efforts
- Active participant in implementation efforts (e.g., involved in transformative efforts in primary care/PACT setting)
- Researcher involved in evaluation or research relevant to the SCM-PM
- Not involved, but interested in learning more
- Not aware of this effort to implement the SCM-PM

# Project STEP

## Program for Research Leadership

### Donaghue Foundation and Mayday Fund

- Evaluate processes of implementation to determine best practice models for broader dissemination and implementation.
- Changes in group and organizational processes and evaluation of pain management and organizational outcomes are examined as the model is adopted.
- Qualitative and quantitative analysis will evaluate components of program implementation. Data will include administrative, outcome, and interview-based measures.



# Sources of Data Collection

- Qualitative data from primary care providers and nursing staff, and specialists, regarding their experiences caring for patients with pain
- Manual extraction of indicators of quality of pain care from primary care provider progress notes
- Automated electronic health record and administrative data extraction examining key dimensions of pain care consistent with SCM-PM (e.g., guideline concordant care, opioid risk mitigation strategies)
  - Pain Cohort (moderate to severe pain)
  - Opioid Cohort (receipt of long term opioid therapy, i.e., >90 days)

# Qualitative data from providers and nursing staff

- How would you describe your role as a staff member working with chronic pain patients?
- Describe some barriers that you feel limit your ability to manage chronic pain.
- Describe some of the positive aspects of caring for patients with chronic pain.
- What are some of the negative aspects of caring for patients with chronic pain?

## Follow-up assessment questions:

- Has your care for Veterans with chronic pain changed over the past X months? If yes, please describe the changes.
- What activities/initiatives/changes within VACHS have taken place within the past X months that have improved your care of Veterans with chronic pain (if any)?
- What are the continuing barriers that you feel limit your ability to manage Veterans with chronic pain

# Baseline Qualitative Assessment Primary Care Providers

## Barriers:

Inadequate training

Organizational impediments

Clinical quandaries and the frustrations that accompany them

Issues related to shared care among PCPs and specialists

Antagonistic aspects of provider-patient interactions

Skepticism

Time factors

## Facilitators:

Intellectual satisfaction of solving difficult diagnostic and management problems

Ability to develop keener communication skills

Rewards of healing and building therapeutic alliances with patients

Universal protocols

Availability of complementary and alternative medicine resources

Multidisciplinary care

# Baseline Qualitative Assessment Specialty Clinics

Survey administered to Pain Medicine, Neurology,  
Rehabilitation Medicine, Chiropractic Medicine

Themes identified:

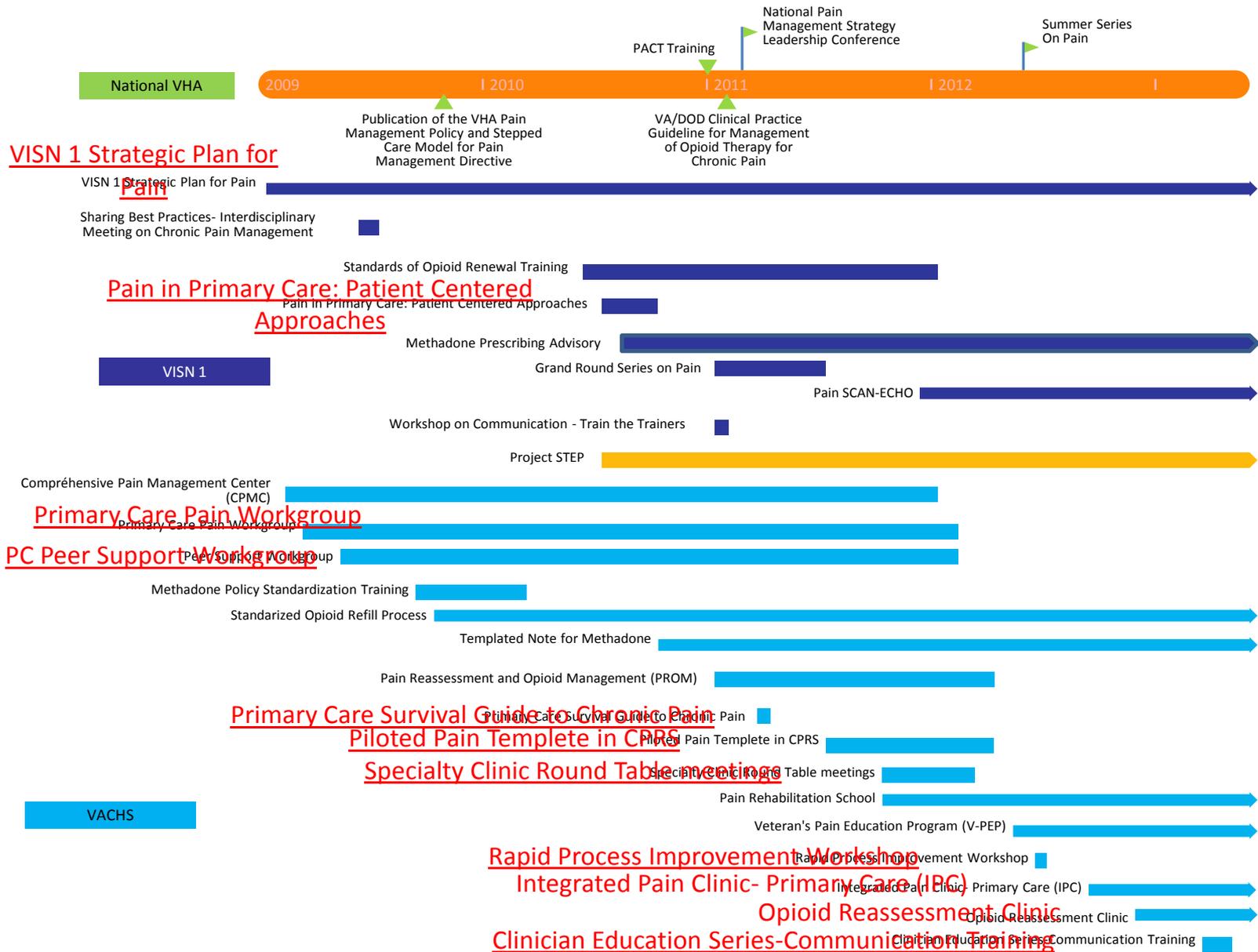
- Barriers
  - Communication between patients and other providers/Coordination between clinics
  - Resource limitations
  - Demand exceeds capacity
  - Patient attitudes/beliefs about pain management
- Facilitators:
  - Multidisciplinary approach/team approach/support
  - Good communication

# Baseline Qualitative Assessment: Nursing Staff

## Themes identified:

- Barriers
  - Primacy of Medications
  - System Issues
  - Personal Barriers
  - Challenging Interpersonal Aspects of Patients
  - Clinical Quandaries
  - Dealing with Failure
- Facilitators
  - Patient Centered Care
  - Team Based Care

# Implementation Timeline



# Quality of Care Data Extraction

- Examination of quality of care of chronic pain
  - Documentation of pain assessment, treatment planning, and reassessment (outcomes), and patient education
- Consistent with goals of VHA National Pain Management Strategy, which include continual monitoring and documentation of outcomes of pain treatment, and multifactorial assessment that includes:
  - Pain intensity
  - Pain interference
  - Physical capacities

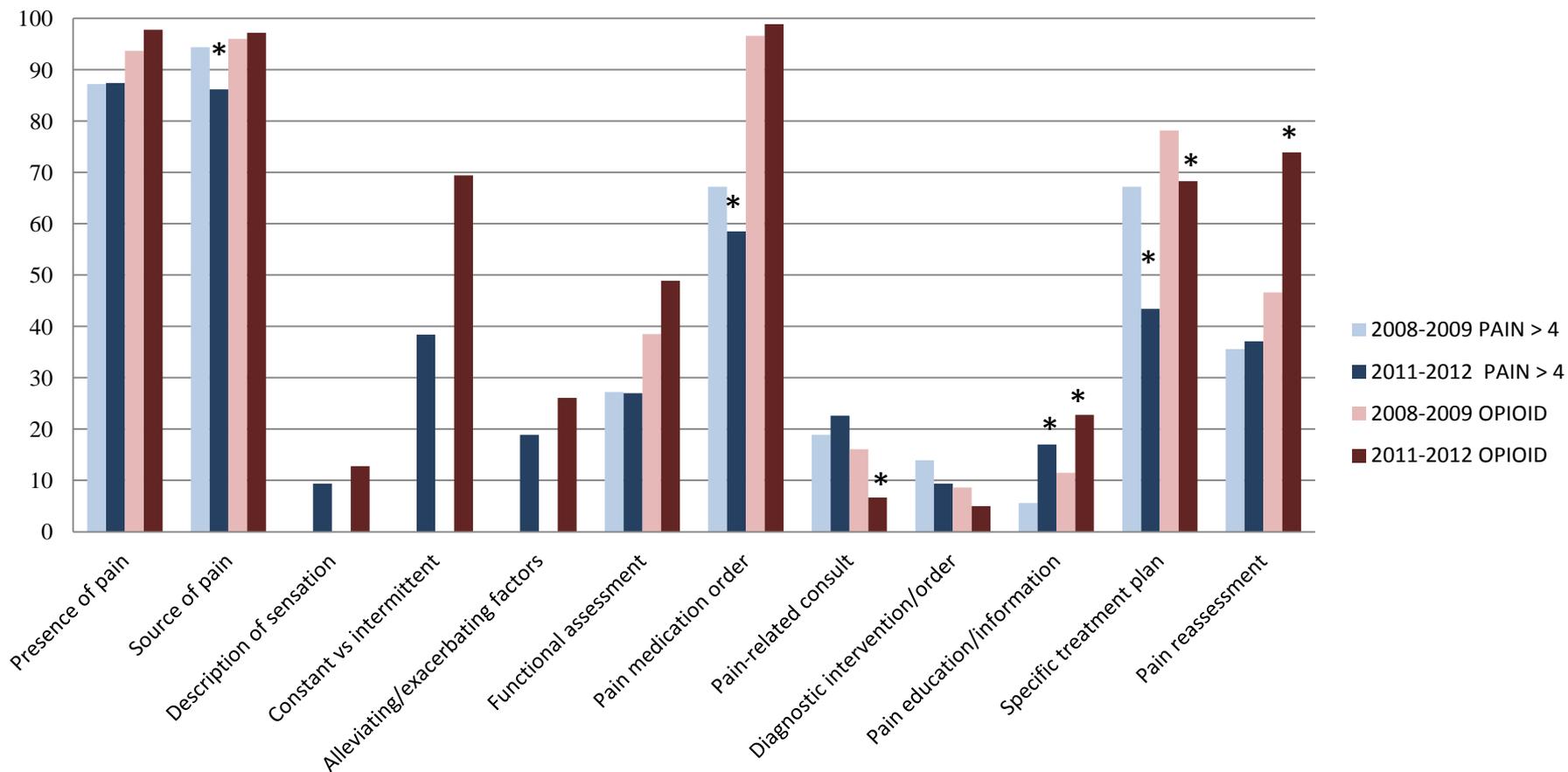
# Quality of Care Data Extraction

- Creation of data extraction tool
  - Quality of care coding tool developed through literature review and VA/DOD policies and guidelines, with input from pain mgmt providers
- Specific focus on pain assessment, treatment planning, and reassessment
- Coding manual defined with operational definitions
- Acceptable inter-rater reliability
  - (Cohen's kappa .78 -.91)

# Quality of Care Data Extraction

- Two cohorts identified for each year examined:
  - Pain cohort (pain score  $\geq 4$  during that year)
  - Opiate cohort (opiate prescription  $> 90$  days during that year)
- Random sample of 200 patients – linked to a primary care appt – pulled for each cohort in each year
- Primary care note is assessed for quality of pain assessment, treatment planning, and reassessment using data extraction

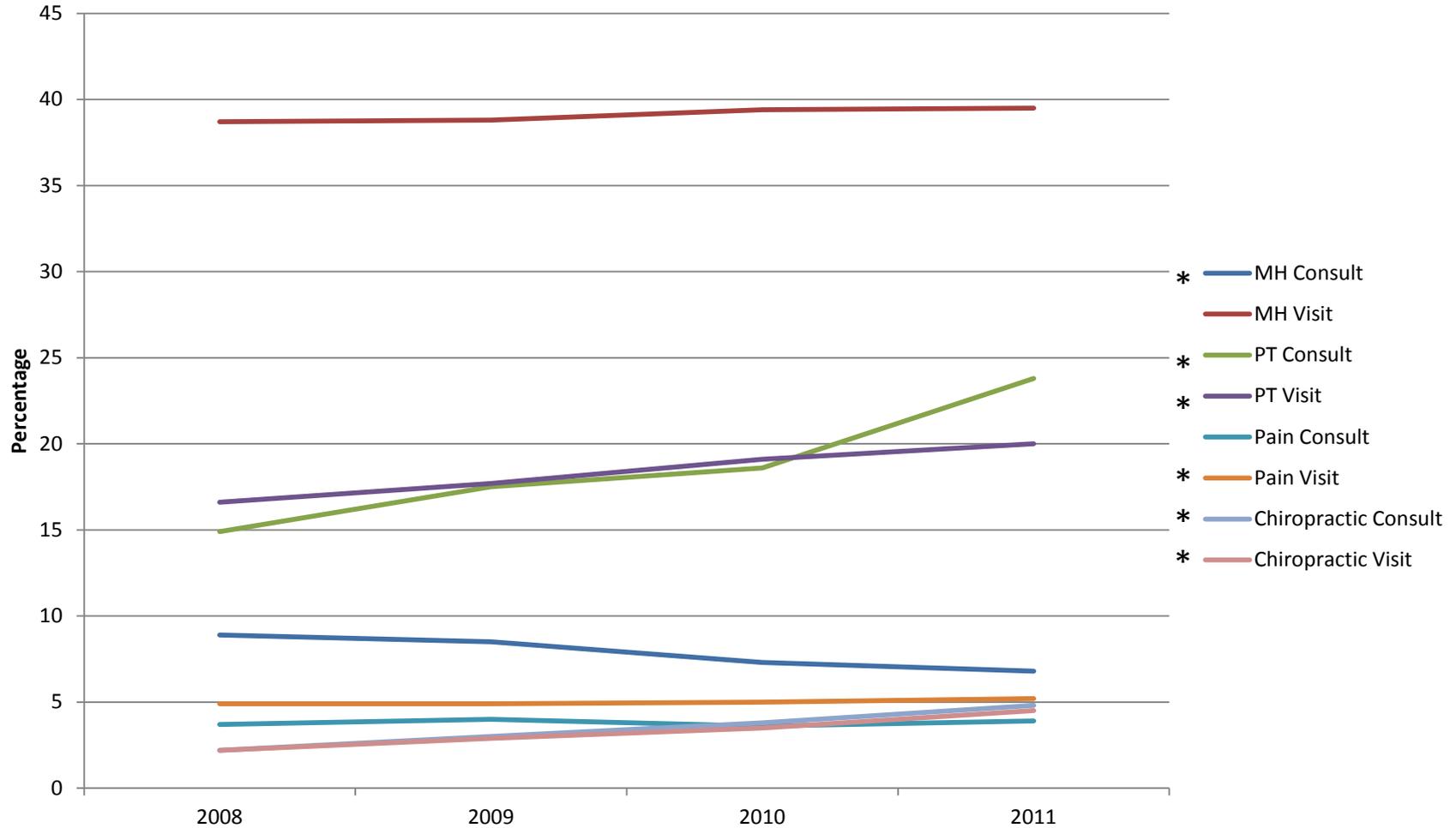
# Manual Chart Extraction Data: Quality of Care Indices



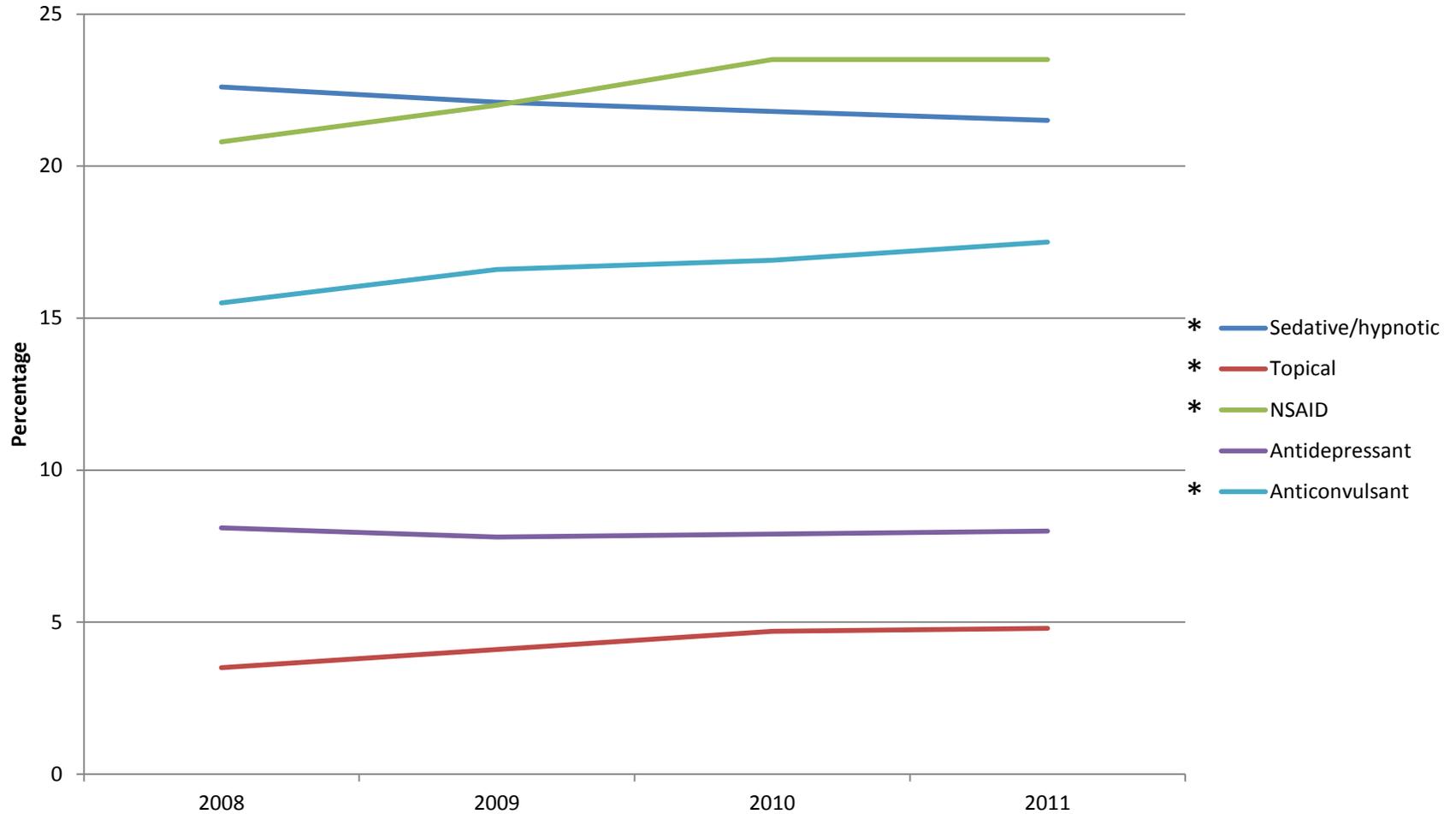
# Automated EHR data extraction

- All patients receiving care in a specific year (e.g., July 2008-June 2009)
- Applied a large set of metrics designed to capture evidence of guideline concordant pain care consistent with SCM-PM
- Two cohorts identified:
  - Patients reporting presence and intensity of pain of 4 or greater on numeric pain rating scale at primary care visit
  - Patients receiving long term opioid therapy defined as receipt of opioid medication for >90 consecutive days

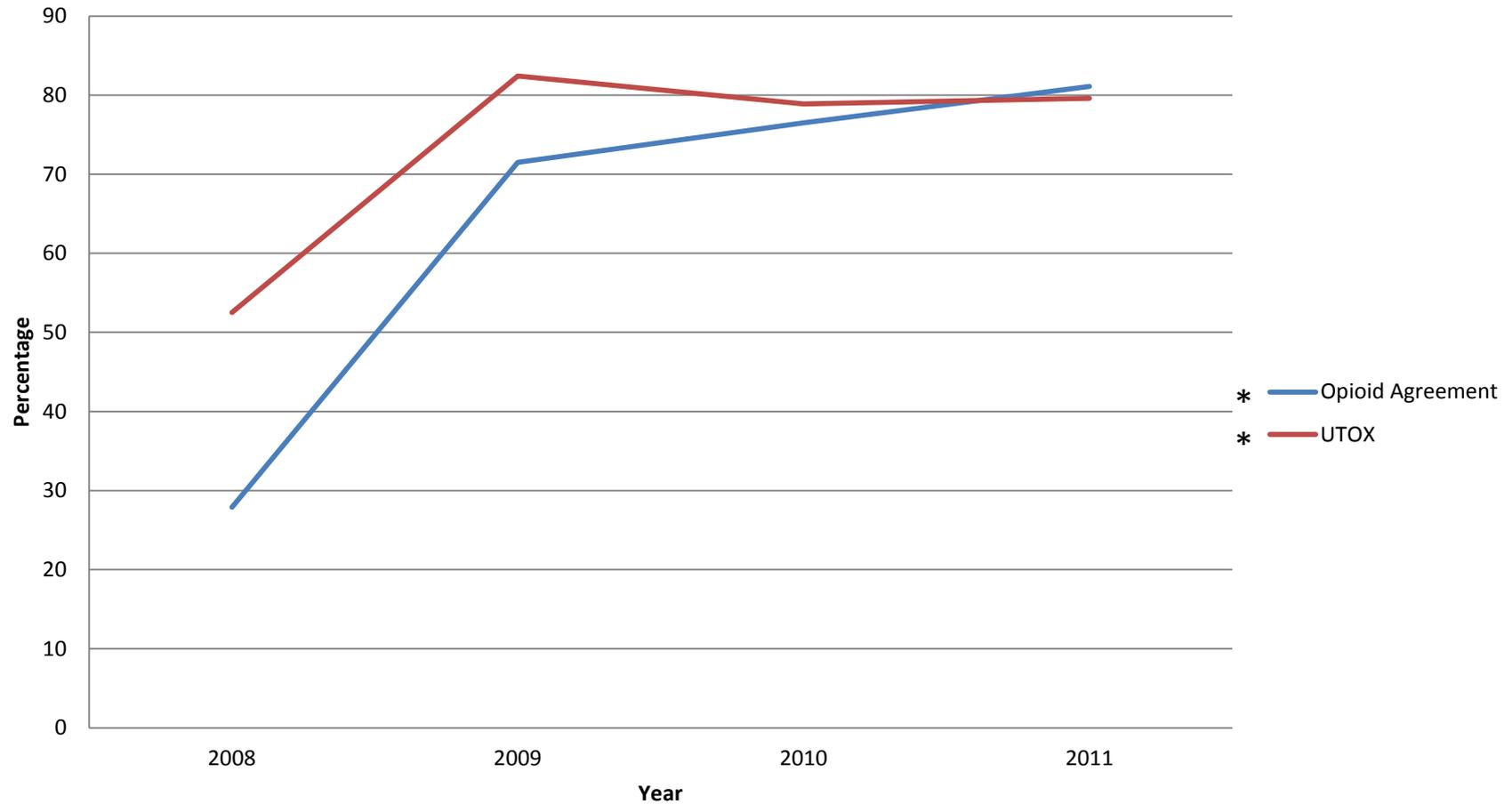
# Automated EHR Extraction Specialty Care Services Pain Cohort



# Automated EHR extractions: Use of co-analgesics Pain Cohort



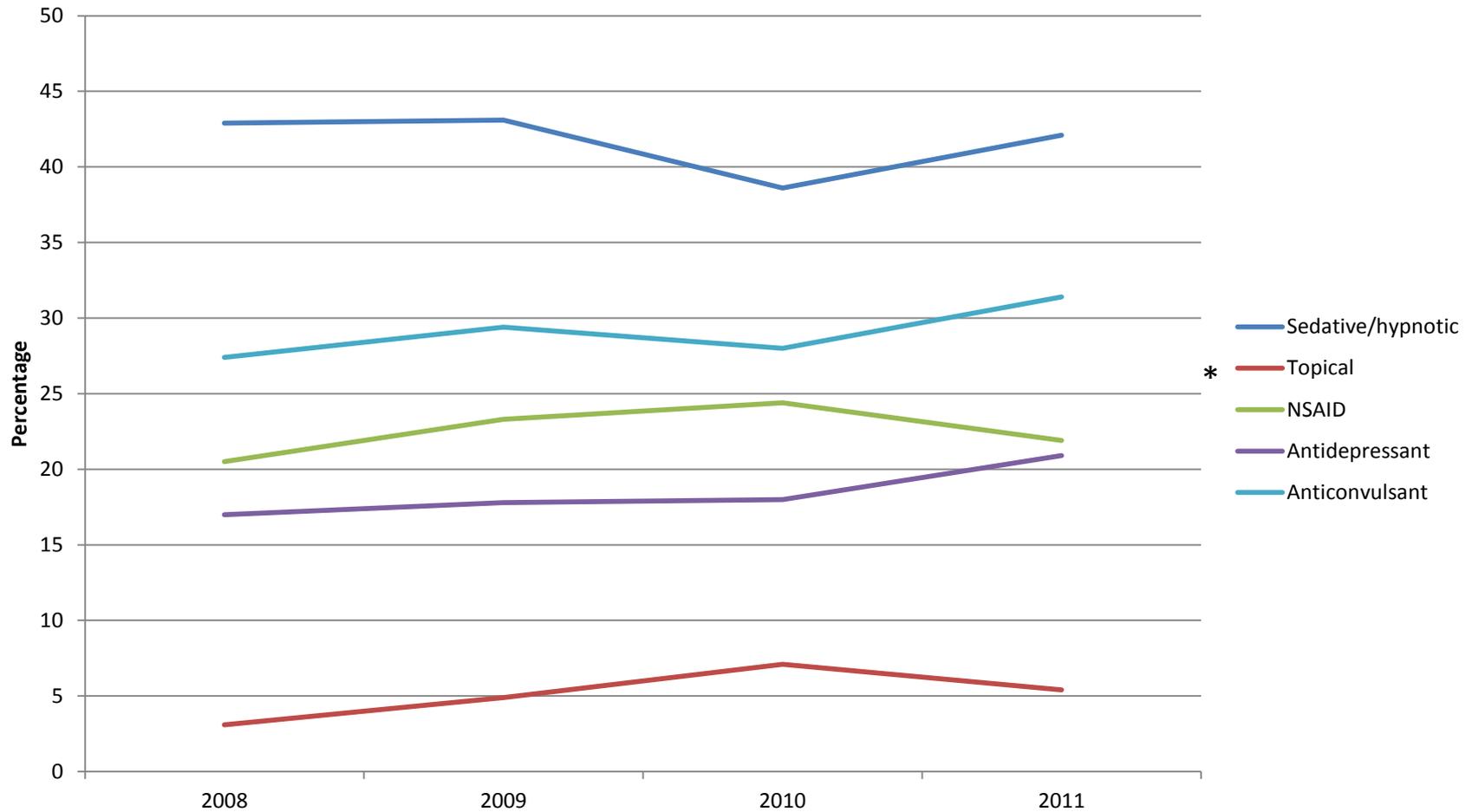
# Automated EHR Extraction Opioid Therapy Standards Opioid Cohort



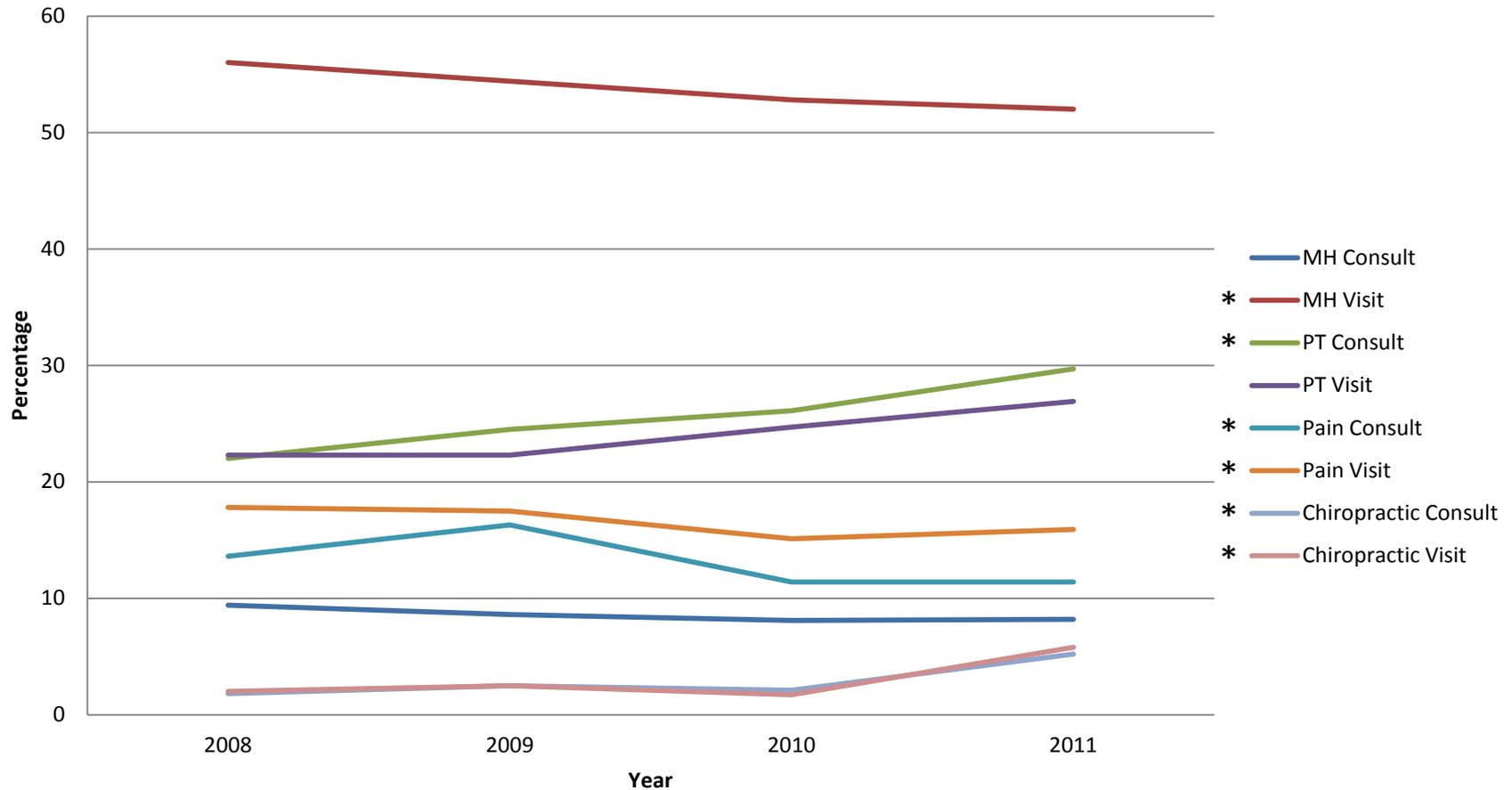
# Automated EHR Extraction

## Use of Co-Analgesics

### Opioid Cohort



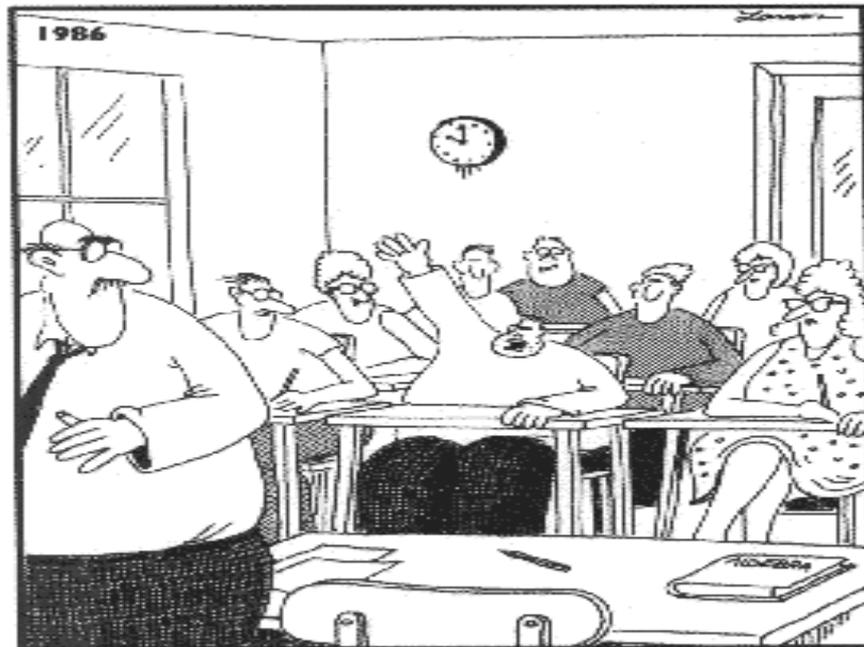
# Automated EHR Extraction Specialty Care Services Opioid Cohort



# Publications

- Kerns, R.D., Philip, E.J., Lee, A., & Rosenberger, P.R. (2011). Implementation of the Veterans Health Administration National Pain Management Strategy. *Translational Behavioral Medicine*, 1, 635-643.
- Rosenberger, P.H., Philip, E., Lee, A. & Kerns, R.D. (2011). VHA National Pain Management Strategy: Implementation of stepped pain management. *Federal Practitioner*, 28, 39-42.
- Lincoln, L.E., Pellico, L., Kerns, R.D., & Anderson, D. (2013). Barriers and facilitators to chronic non-cancer pain management in primary care. *Journal of Palliative Care and Medicine*, S3, 001. doi:10.4172/2165-7386.S3-001.
- Pellico, L.H., Gilliam, W.P., Lee, A., & Kerns, R.D. (2012). Hearing new voices: Nurses and Medical Assistants experience caring for chronic noncancer patients in primary care. Manuscript under review.

Thanks!!  
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"Mr. Osborne, may I be excused? My brain is full."