

# Innovation in non-pharmacologic treatment options for musculoskeletal pain: *Studying the implementation of VA's chiropractic program*

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**VA** Defining  
**HEALTH CARE** **EXCELLENCE**  
in the 21st Century

# Background

- VA introduced chiropractic services in 2 phases
  - 2000
    - Non-VA (purchased) care started
  - 2004
    - Chiro added to standard medical benefits package available to all Veterans
      - Minimum of 1 on-station per VISN

# Background

- Commonly used in US
  - ~12% general population (Weeks 2016)
  - ~13% DoD population (Williams 2016)
  - ~40% of chronic pain population (Breuer 2010)
- In demand by Veterans
  - ~75% would want access (Denneson 2011)
- Treatment options supported by reasonable evidence for LBP and neck pain
  - E.g. spinal manipulation/mobilization/exercise (Chou 2007; Haldeman 2010)
- Negative correlation with opiate use in LBP (Vogt 2005; Rhee 2007; Franklin 2009)

# Background

- Yet...
  - Rare in US hospital systems (Anath 2010)
  - Varying perceptions among physicians (Busse 2009)
  - Congressional mandate for VA
- Challenges for VA implementation
- Program assessment
  - Administrative
  - Research
    - Qualitative & quantitative

# Poll Question #1

- What is your primary role in VA?
  - student, trainee, or fellow
  - clinician
  - researcher
  - Administrator, manager or policy-maker
  - Other

## Variations in the Implementation and Characteristics of Chiropractic Services in VA

Anthony J. Lisi, DC,\*† Raheleh Khorsan, MA, PhD(c),‡§ Monica M. Smith, DC, PhD,§ and Brian S. Mittman, PhD§||

- Qualitative study
  - *Medical Care* 2014

**Background:** In 2004, the US Department of Veterans Affairs expanded its delivery of chiropractic care by establishing onsite chiropractic clinics at select facilities across the country. Systematic information regarding the planning and implementation of these clinics and describing their features and performance is lacking.

**Objectives:** To document the planning, implementation, key features and performance of VA chiropractic clinics, and to identify variations and their underlying causes and key consequences as well as their implications for policy, practice, and research on the introduction of new clinical services into integrated health care delivery systems.

**Research Design, Methods, and Subjects:** Comparative case study of 7 clinics involving site visit-based and telephone-based interviews with 118 key stakeholders, including VA clinicians, clinical leaders and administrative staff, and selected external stakeholders, as well as reviews of key documents and administrative data on clinic performance and service delivery. Interviews were recorded, transcribed, and analyzed using a mixed inductive (exploratory) and deductive approach.

**Results and Conclusions:** Interview data revealed considerable variations in clinic planning and implementation processes and clinic features, as well as perceptions of clinic performance and quality. Administrative data showed high variation in patterns of clinic patient care volume over time. A facility's initial willingness

to establish a chiropractic clinic, along with a higher degree of perceived evidence-based and collegial attributes of the facility chiropractor, emerged as key factors associated with higher and more consistent delivery of chiropractic services and higher perceived quality of those services.

**Key Words:** Department of Veterans Affairs, chiropractic, health services research, rehabilitation services, complementary therapies, program evaluation

(*Med Care* 2014;52: S97-S104)

Chiropractic services are widely used in the United States and are covered by Medicare, public and private health insurance plans, the Department of Defense, and Medicaid programs.<sup>1-7</sup> It has been estimated that chiropractors provide up to 40% of the low back pain care in the United States,<sup>8</sup> and generally deliver care consistent with current clinical practice guidelines.<sup>9-11</sup>

Nevertheless, before 1999 it was not common for the Department of Veterans Affairs (VA) to provide chiropractic services to Veterans.<sup>12</sup> Congressional authorizations in 1999 and 2001 resulted in the addition of chiropractic care to VA's standard medical benefits, making it available to all eligible Veterans (Pub. L. 106-111; Pub. L. 107-135).<sup>13</sup> In 2004, VA established the policy that a minimum of 1 health care facility in each of its 21 geographic service regions would provide chiropractic services onsite; the remaining facilities would provide these services either onsite or by referring patients off-site to non-VA doctors of chiropractic (DC).<sup>14,15</sup> An inaugural group of 26 VA facilities was selected, and by the end of 2005 each had established an onsite chiropractic clinic.

The planning of these clinics and development of operational parameters were largely determined by each local facility with minimal coordination from VA Central Office

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# Purpose

- Assess and describe
  - Implementation of chiro programs in a subset of VA facilities
  - Organizational structures/processes/outcomes

# Methods

- Observational comparative case study
- Pilot + 6 VA facilities
  - Selected for known diversity
- Semi-structured interviews
- Policy / procedure documents

# Directed content analysis

- Thematic codes
  - A-priori hypotheses based on prior literature and VA managerial data
  - New themes emerging from transcript review
- Transcripts / documents coded and analyzed
  - NVivo (QSR International) and Word (Microsoft)

# Results

- Site visits + supplemental phone interviews
  - Stakeholder interviews (n=118)
  - Policy/procedure documents (n=75)

## Coding

- High interrater agreement (k=0.8)

# Interview subjects

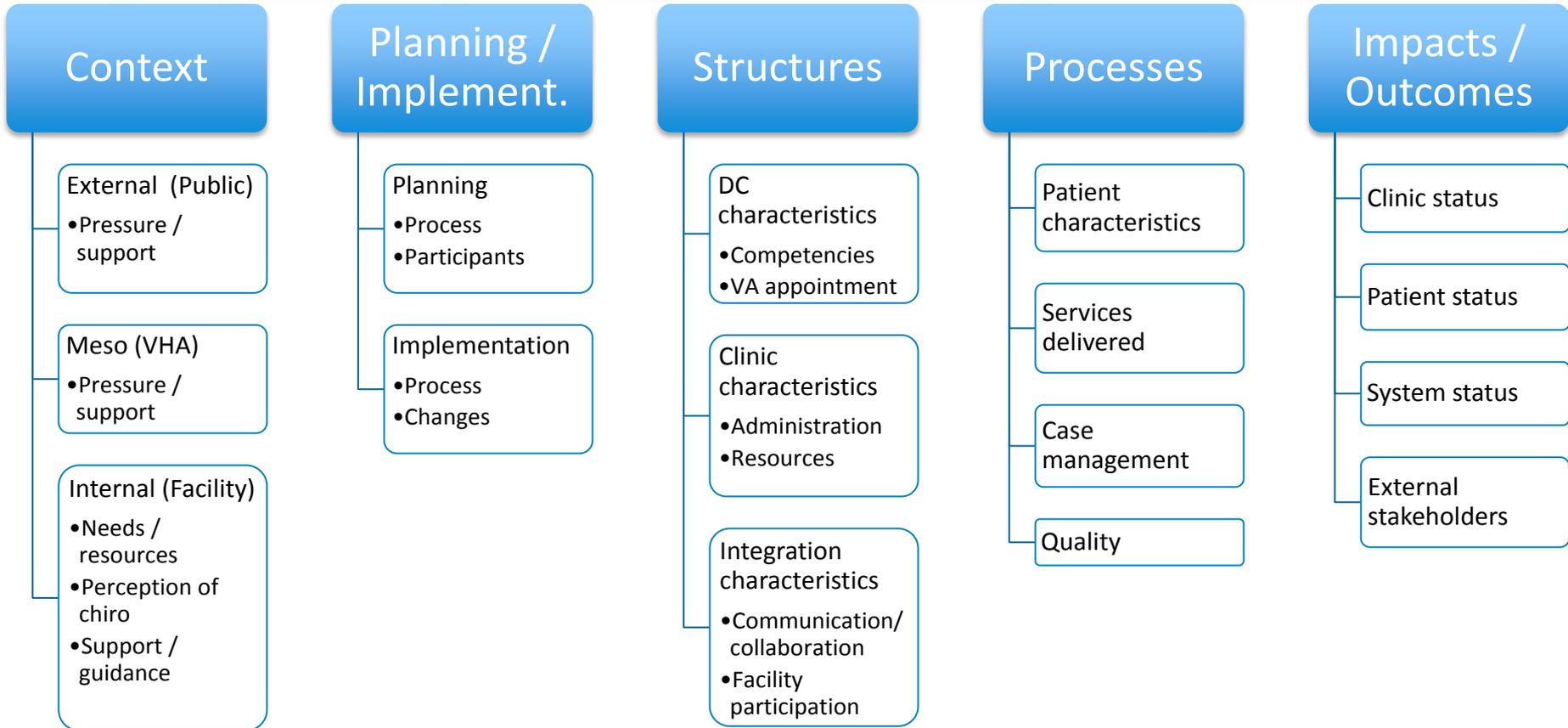
	(n=118)	
Non-DC clinicians	53%	(62)
Patients	15%	(18)
Senior administrators	9%	(11)
DCs	6%	(7)
DC support staff	5%	(6)
Middle administrators/planners	4%	(5)
DC supervisors	3%	(4)
Former federal advisory committee*	3%	(3)
Academic affiliate staff*	2%	(2)

\*Non-VA

# Documents

- VA regional (VISN) and facility policies
- Local service agreements
- Clinician privileges

# Themes



# Context

- National level
  - Barriers

“My big boss at Central Office was totally opposed to doing anything with chiropractic. He was an MD of the old school and just despised the idea. There was a very large attitudinal problem...the current [senior administrator] when told he would have to have chiropractic care said ‘over my dead body.’ ”

*VACO administrator/planner*

# Context

- National level
  - Barriers

“I don’t know if it was necessarily negative about chiropractors per se, or if it was negative about VA being told by Congress that they had to do something...because a lot of what VA gets is unfunded mandates, of which this chiropractic integration is another.”

*Federal advisory committee member*

# Context

- Facility level
  - Variation in perception/willingness

“I believe that chiropractic care has no scientific basis...[it] is quack medicine.”

*Neurologist*

“[My perception] was positive. I’ve read up on some of the literature that shows chiropractors, as far as treating back pain, are actually better than us... so I thought it’d be a good move for Veterans.”

*Primary care physician*

# Context

- Common determinant of support
  - Prior individual experience

“I was excited [to learn of plans to implement a chiropractic clinic], because I have colleagues who are chiropractors and I know what they do.”

*Physiatrist*

# Planning/Implementation

- Variation in degree
  - Later sites more informed/guided

“Central office provided zero information except for the [chiropractic] Directive.”

*Chief of Staff*

“The help that we got from central office was instrumental in this new endeavor for our medical center.”

*Facility Director*

# Structures

- Clinic characteristics
  - Variation in alignment, staffing
- Chiropractor characteristics

“We couldn’t have picked a better DC. She impressed us with her knowledge right from the start...and made us feel comfortable to work with her.”

*Chiropractor supervisor*

“I think some of his personality has made him a little bit of a more difficult fit with a number of people in the service, and perhaps [others at the facility].”

*Chiropractor supervisor*

# Processes

- Similarity
  - Patient population
  - Services delivered
- Differences
  - Privileging
  - Case management; team collaboration

# Impacts/outcomes

- All are functioning
  - Use trends increasing
- Stakeholder perception predominantly favorable
  - Very rarely, non-DC clinicians are opposed
- Factors such as clinical outcome and value are not routinely tracked

# Impacts/outcomes

- Veteran themes
  - Highly satisfied with chiro services
  - Pleased to receive in VA
  - Critical of access/dosage

# Impacts/outcomes

- MD/DO physician themes
  - Referring or not
    - Limited knowledge of chiropractic services
    - Limited knowledge of EB guidelines for LBP/NP
  - Referring

“We look at all of the management of pain in our VA, chronic opioid use, setting up the step care-type planning... and one of the things we started looking was what was veteran preference. There were veterans saying “hey I’ve been to the chiropractor. It really seemed to help.” And, you know, we didn’t have it available. So that was a big concern and a reason why we moved towards finding a chiropractor. It’s been a very good choice and a very positive experience.”

*Pain medicine (anesthesia)*

# Limitations

- Results not generalizable
- Systematic sampling process
  - Yet no data from non-participants
- More work to correlate themes with end results

- Database study  
— *JMPT 2016*

## TRENDS IN THE USE AND CHARACTERISTICS OF CHIROPRACTIC SERVICES IN THE DEPARTMENT OF VETERANS AFFAIRS



Anthony J. Lisi, DC,<sup>a,b</sup> and Cynthia A. Brandt, MD, MPH<sup>c,d</sup>

### ABSTRACT

**Objectives:** The purpose of this study was to analyze national trends and key features of the Department of Veterans Affairs' (VA's) chiropractic service delivery and chiropractic provider workforce since their initial inception.

**Methods:** This was a serial cross-sectional analysis of the VA administrative data sampled from the first record of chiropractic services in VA through September 30, 2015. Data were obtained from VA's Corporate Data Warehouse and analyzed with descriptive statistics.

**Results:** From October 1, 2004, through September 30, 2015, the annual number of patients seen in VA chiropractic clinics increased from 4052 to 37 349 (821.7%), and the annual number of chiropractic visits increased from 20072 to 159366 (693.9%). The typical VA chiropractic patient is male, is between the ages of 45 and 64, is seen for low back and/or neck conditions, and receives chiropractic spinal manipulation and evaluation and management services. The total number of VA chiropractic clinics grew from 27 to 65 (9.4% annually), and the number of chiropractor employees grew from 13 to 86 (21.3% annually). The typical VA chiropractor employee is a 45.9-year-old man, has worked in VA for 4.5 years, and receives annual compensation of \$97 860. VA also purchased care from private sector chiropractors starting in 2000, growing to 159 533 chiropractic visits for 19 435 patients at a cost of \$11 155 654 annually.

**Conclusions:** Use of chiropractic services and the chiropractic workforce in VA have grown substantially over more than a decade since their introduction. (*J Manipulative Physiol Ther* 2016;39:381-386)

**Key Indexing Terms:** *Chiropractic; Veterans Administration; Health Services*

**T**he Department of Veterans Affairs (VA) operates the largest integrated health care system in the United States, including 144 hospitals, more than 1400 other health care facilities, and a workforce of more than 326 000.<sup>1</sup> More than 9 million of the approximately 22 million living US Veterans are enrolled in VA's health care system.<sup>2</sup> Each year, approximately 7 million of those enrolled receive

health care services at VA facilities, including more than 86 million outpatient visits and 700 000 admissions.<sup>3</sup>

The VA recently began a 2-phased approach to introduce chiropractic care to its complement of health care services. In 1999, Public Law 106-117<sup>4</sup> authorized VA to provide chiropractic care by purchasing these services from private sector chiropractors. VA Directive 2000-014, issued May 5, 2000, established VA's first policy on chiropractic care and enabled VA facilities to begin purchasing chiropractic care. Subsequently, in 2001, Public Law 107-135<sup>5</sup> added chiropractic care to the standard medical benefits available to all eligible VA patients and authorized VA to deliver these services on-site at a minimum of 21 medical facilities. VA Directive 2004-035, issued July 16, 2004, updated VA chiropractic policy and enabled VA facilities to begin delivering on-station chiropractic care by hiring and/or contracting with licensed

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# Methods

- Serial cross sectional analysis
  - VA's Corporate Data Warehouse
  - Sampled from the first record of VA chiropractic services and workforce, through the end of FY 2015
  - Previously validated informatics methodology

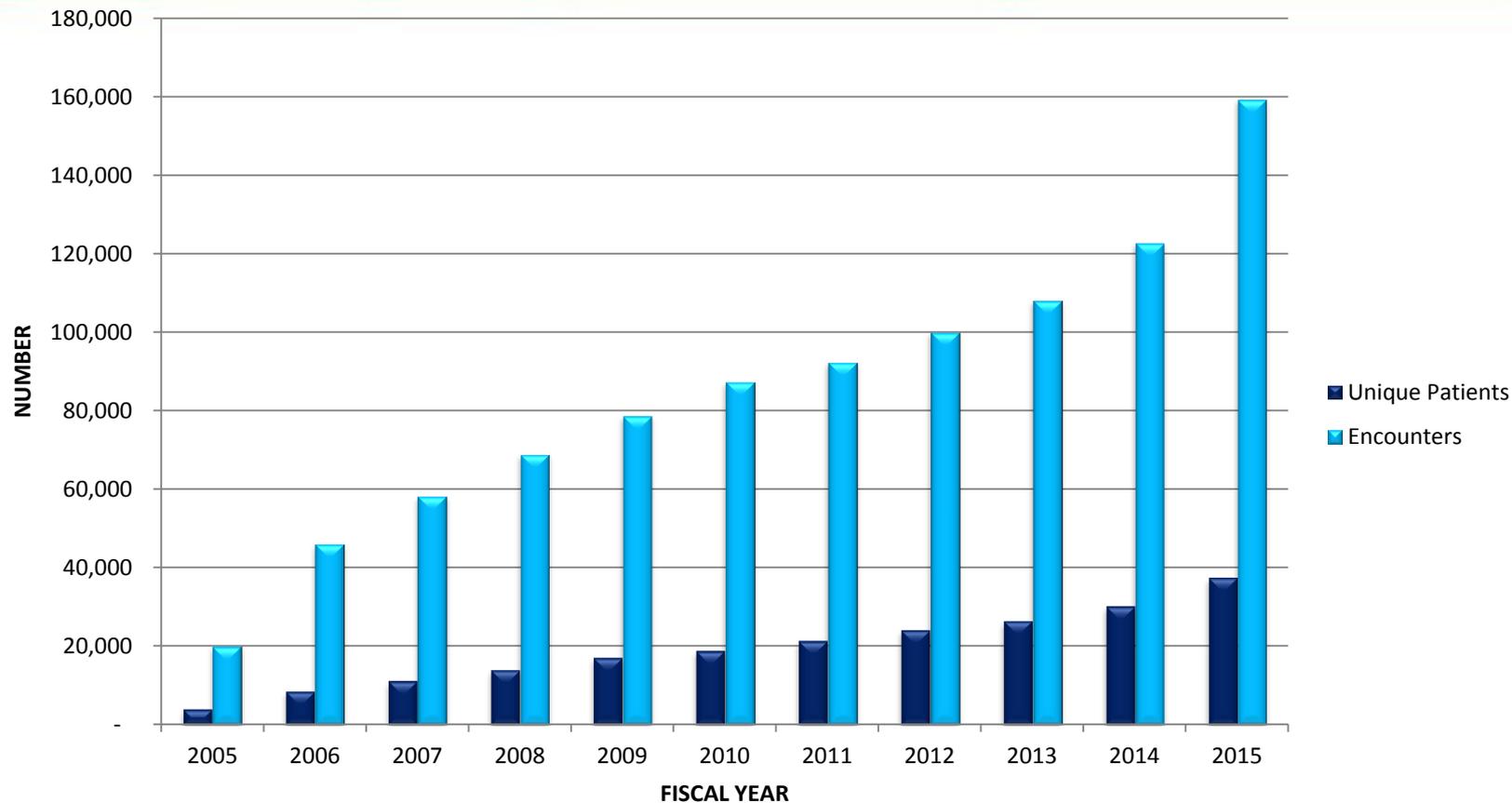
# Results

- On-station chiropractic services
  - Patient characteristics
- On-station DC employee workforce
- Non-VA (purchased) chiropractic services

# On-station

- 11 visits in FY 2004
  - (Prior to Oct 1, 2004)
- Analyzed FY 2005 through FY 2015
  - (11 year period Oct 1, 2004 through Sep 30, 2015)

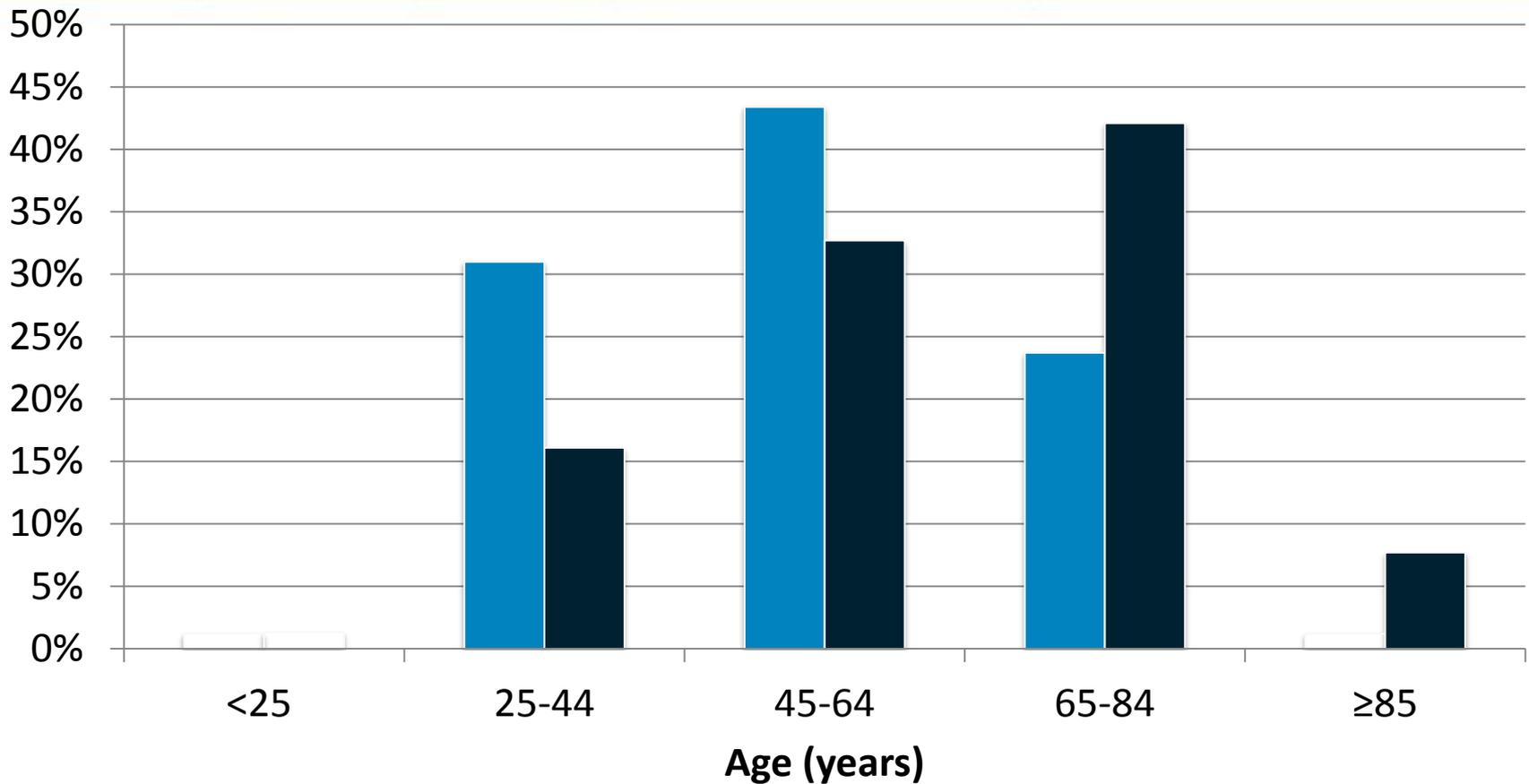
# On-station chiropractic use



# On-station chiropractic patients

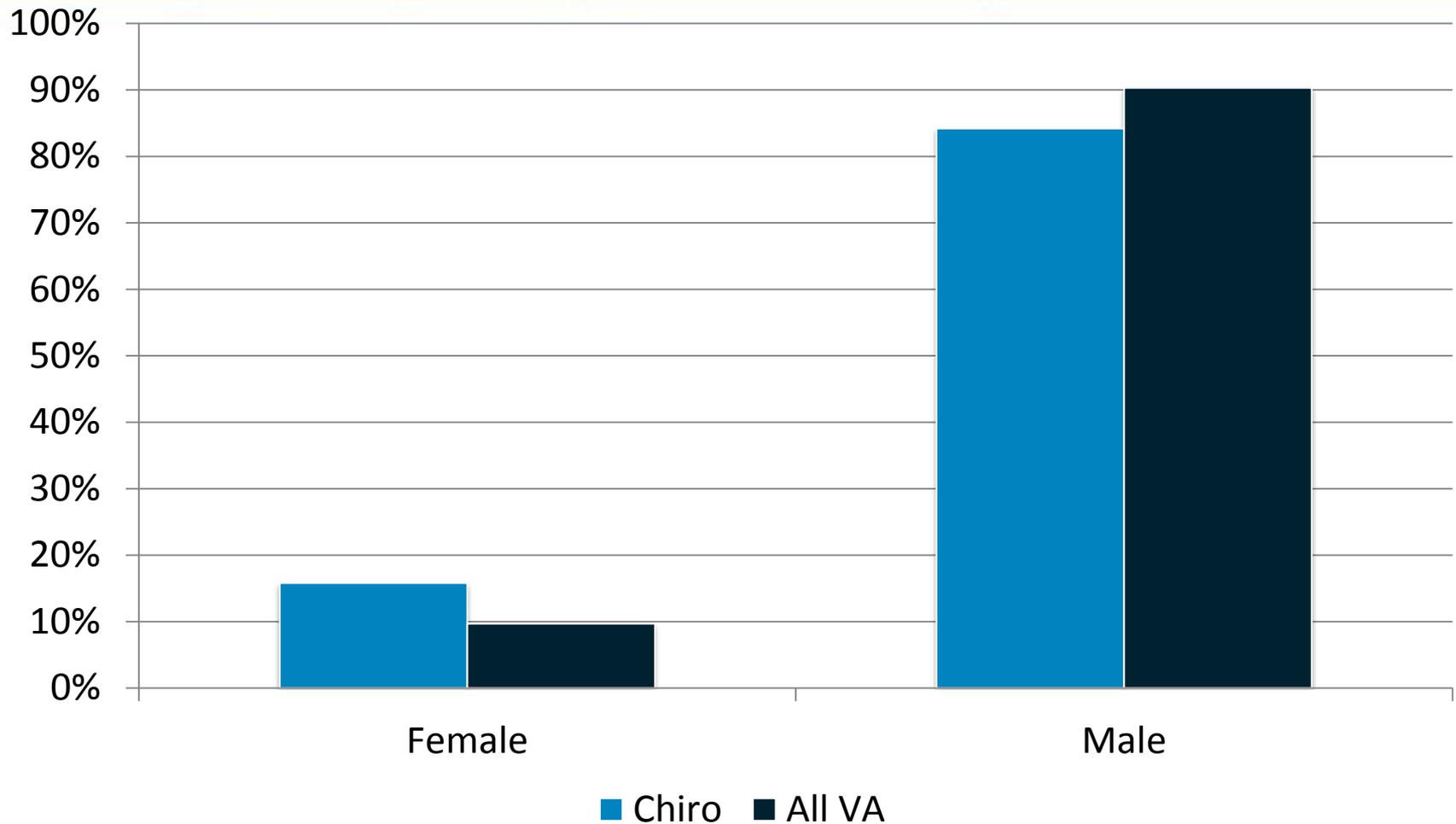
- Assessed
  - Demographics
  - ICD-9
  - CPT

# On-station patients age (FY14)



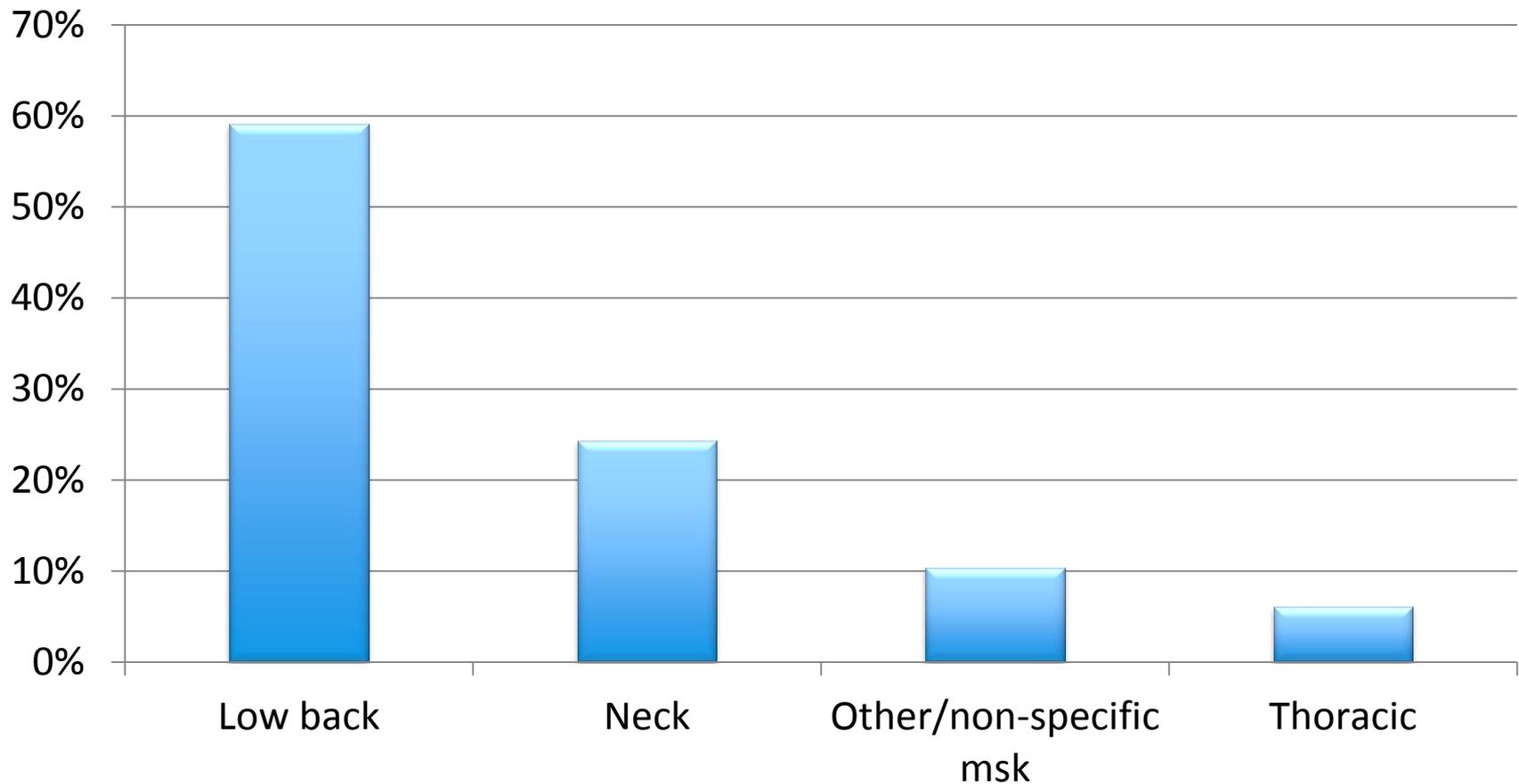
■ Chiro ■ All VA

# On-station patients sex (FY14)



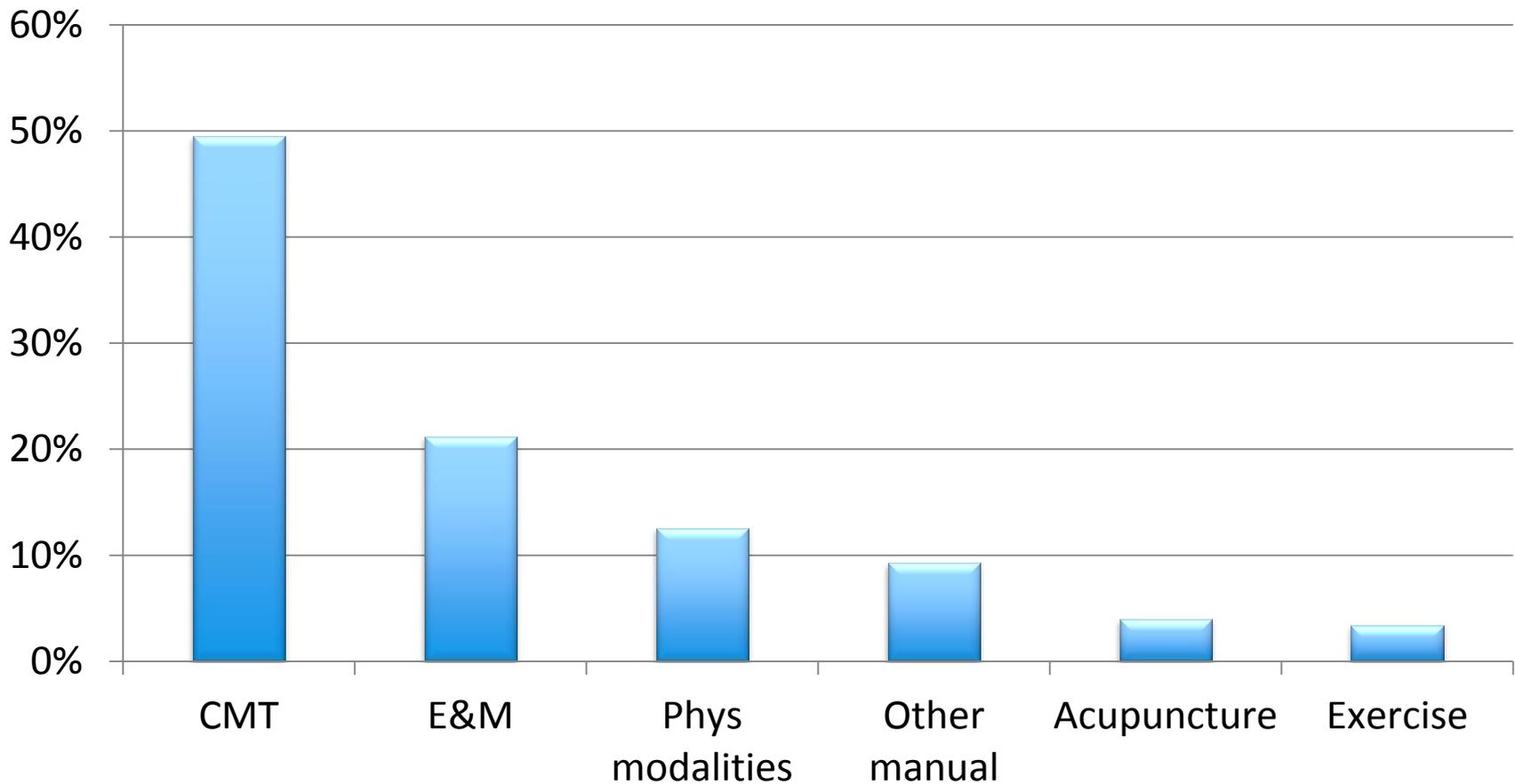
# On-station conditions coded

## ICD-9 Condition categories (FY14)

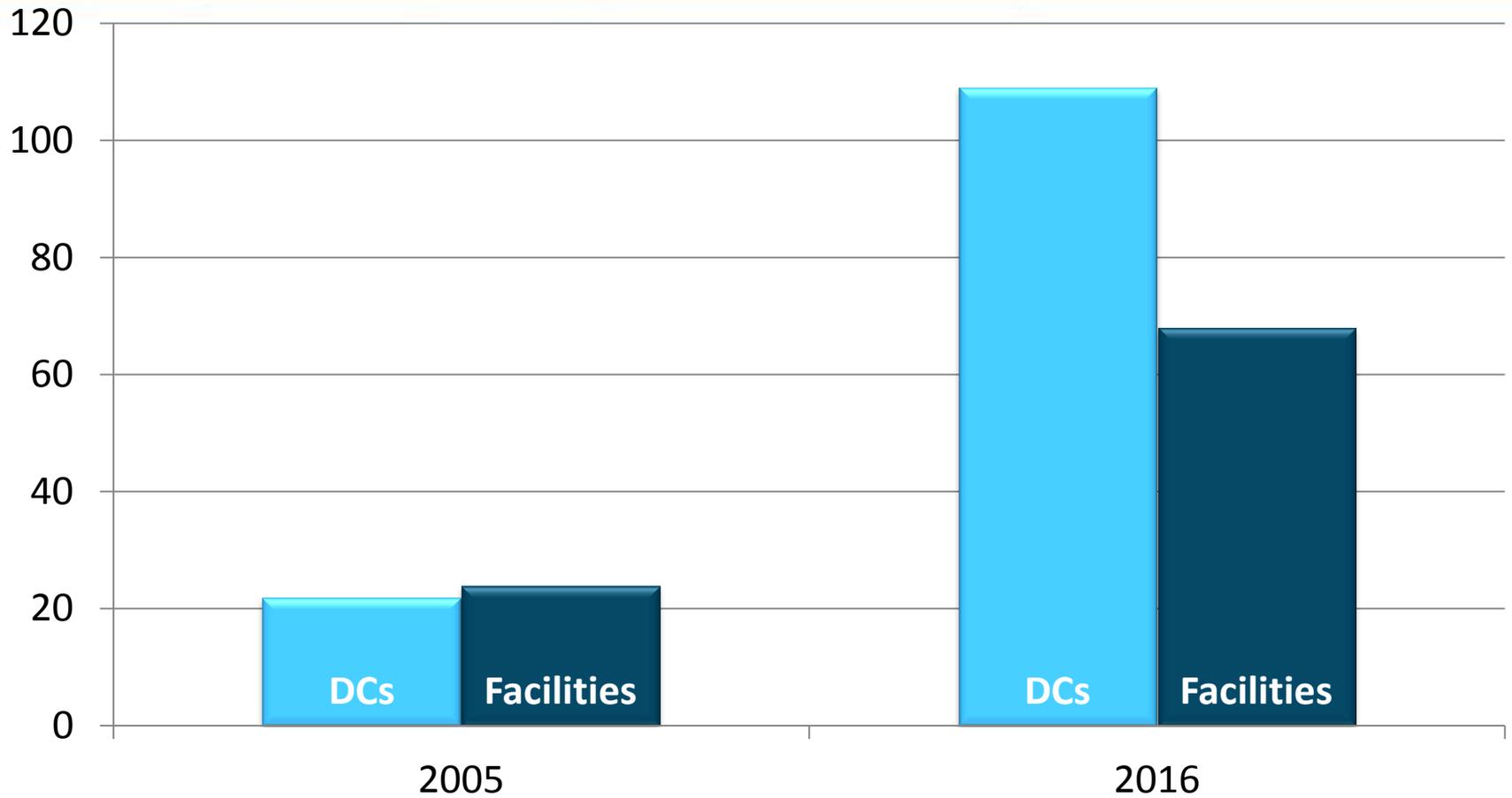


# On-station procedures coded

## CPT categories (FY14)

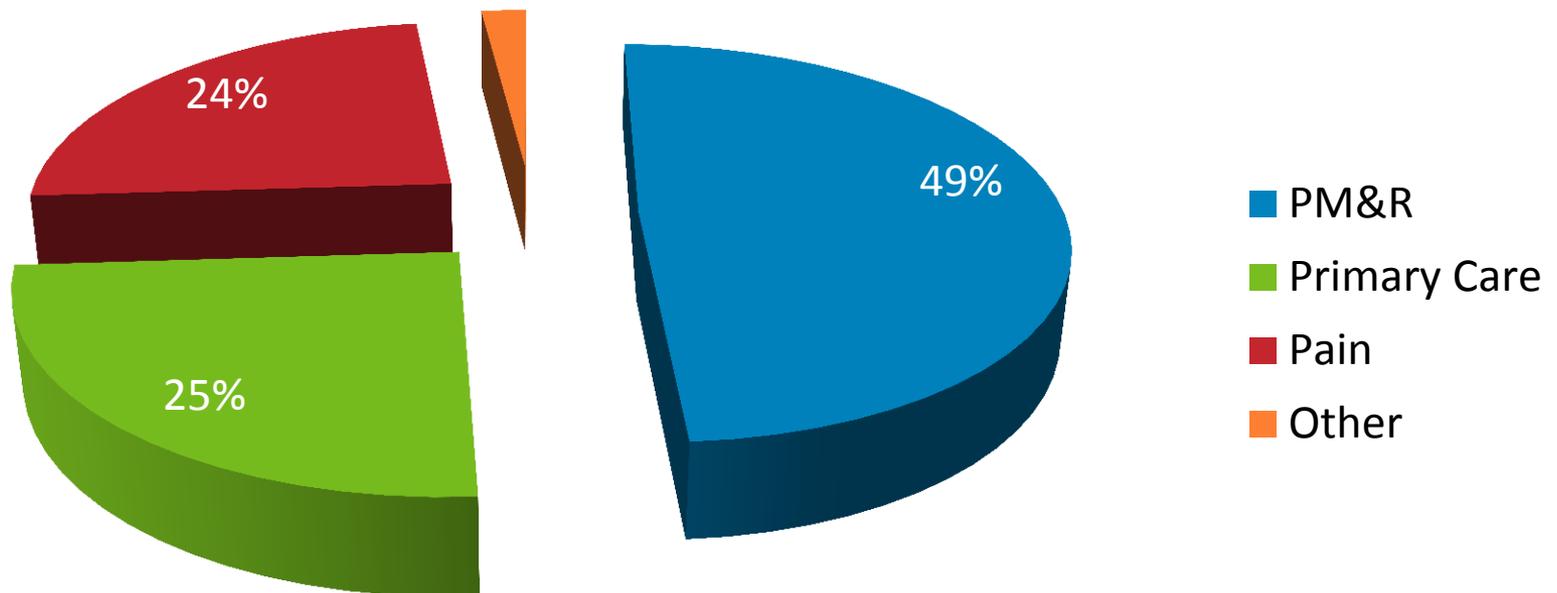


# Chiro workforce

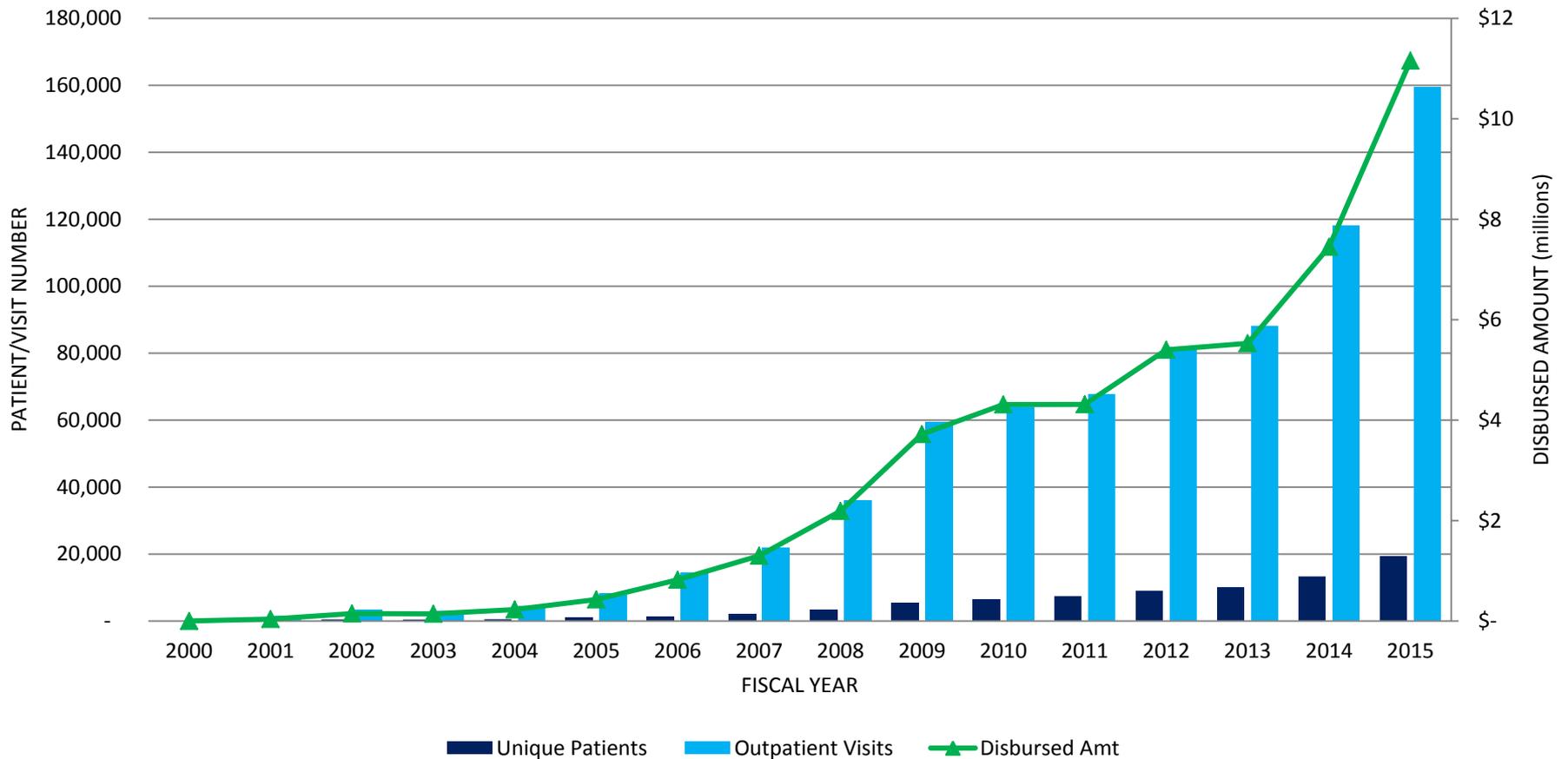


# VA Chiropractic Clinics

## Administrative Alignment

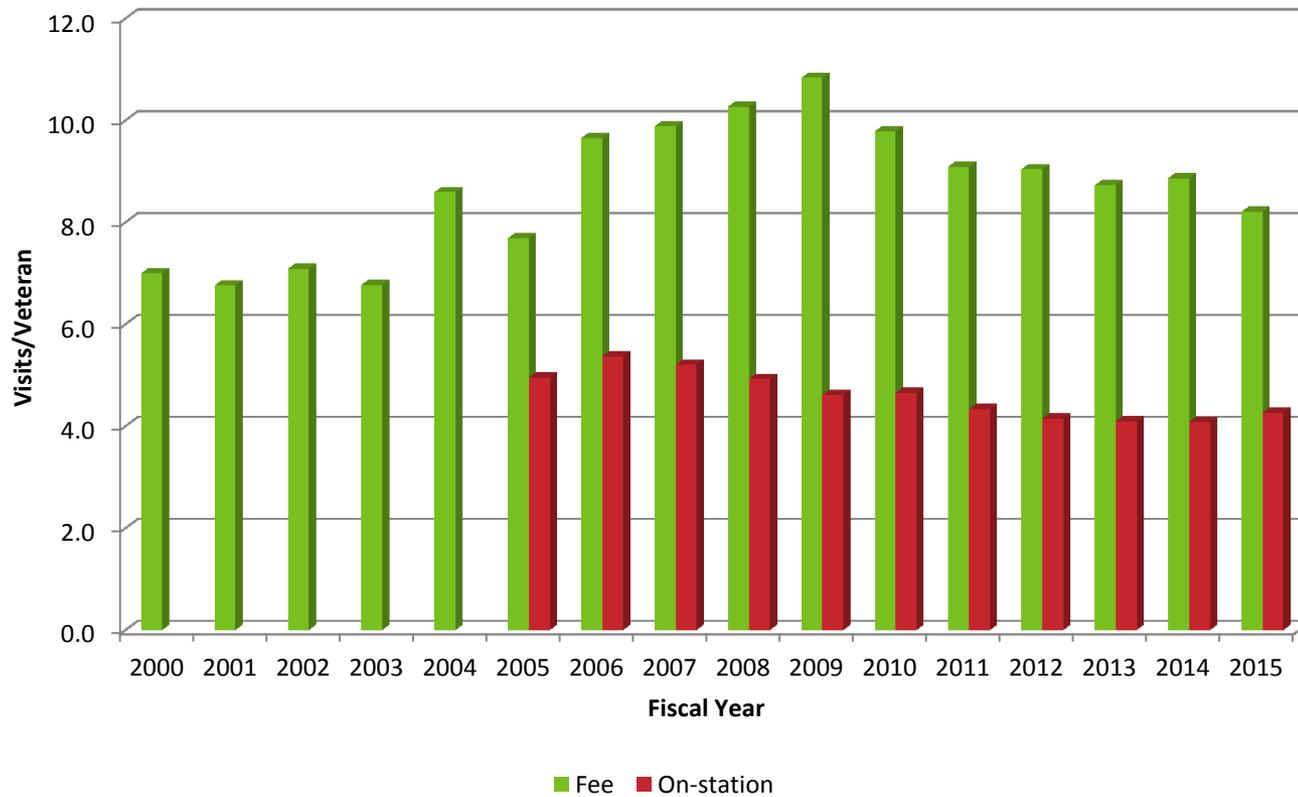


# Non-VA (purchased) chiropractic use



Lisi & Brandt. JMPT 2016

# Utilization Rates



# Discussion

- Significant growth in VA chiropractic use
  - By early 2005 VA had met all statutory requirements
    - Majority of study period represents organic growth
  - Potential explanations
    - Natural diffusion of change in any large medical system
    - Unique VA aspects (patient demand/access)
    - Successful performance of VA DCs
      - Previous preliminary evidence

# Discussion

- Key comparisons
  - Younger age and greater female proportion
    - Consistent with current Veteran cohort
  - Average annual utilization rates
    - Purchased care > on-station
      - Consistent with other studies
    - Both are lower than private systems and published data on effectiveness

# Limitations

- Administrative database caveats
- ICD and CPT coding variability at provider level
- Trends in use may not represent optimal practice
- Workforce data excluded contractors, labor mapping

# Overall Summary

- VA has slowly and steadily expanded access to chiropractic services over past 11+ years
  - EB non-pharm options for msk pain
- Expected barriers and facilitators to implementation
  - Limited degree of uptake and service delivery
  - Continued work to optimize services
- Experiences may be relevant to other emerging services/initiatives in VA
- Value of partnered research

# Resources

- Internet
  - <http://www.rehab.va.gov/chiro/index.asp>
- Intranet
  - <http://vaww.rehab.va.gov/CS/index.asp>
- Contact Information
  - Anthony Lisi, DC ([anthony.lisi@va.gov](mailto:anthony.lisi@va.gov))