Young, Lisi, Halloran and Corcoran
VHA Chiropractic Services

ASSESSING CONDITIONS SEEN AND SERVICES PROVIDED BY VETERANS HEALTH ADMINISTRATION CHIROPRACTORS: COMPARING PROVIDER SELF-REPORT WITH ELECTRONIC HEALTH RECORD DATA

Brent A. Young, DC[1], Anthony J Lisi, DC[1,2] Stephanie M Halloran, DC, MS[3], Kelsey L. Corcoran, DC[1,2]

ABSTRACT

Objective: To compare Veterans Health Administration (VHA) chiropractors' self-report of the most common conditions seen and services provided with electronic health record (EHR) data from VHA chiropractic visits.

Methods: A cross-sectional analysis of VHA administrative data from fiscal year 2019 (October 1, 2018 through September 30, 2019) was conducted to assess the International Classification of Diseases, Tenth Revision (ICD-10) and Current Procedural Terminology® (CPT®) codes of all on-station chiropractic visits. The 100 most common ICD-10 and CPT® code were organized into categories and the proportion of codes in each category was calculated for both diagnoses and procedure. Additionally, a secondary analysis of data from a previous VHA chiropractor survey was conducted to calculate relative frequencies of provider-reported conditions managed and services provided.

Results: Low back pain without radiculopathy (LBPwo) was the most frequent ICD-10 code in administrative data (47.7%) and was also rated the most common condition seen by provider self-report (3.75/4 relative frequency). The frequency of ICD-10 codes for neck pain without radiculopathy (NPwo, 19.99%) was less than half of that for LBPwo, yet DCs' self-reported NPwo relative frequency (3.66/4) was essentially the same as LBPwo. Even greater disparity existed between the very low frequencies of ICD-10 codes for headache and extremity conditions, and the relatively higher rates at which DCs report seeing these conditions. The most frequent CPT® code grouping in administrative data was chiropractic manipulative therapy (CMT), representing 42.7% of all CPT® codes. This was concordant with chiropractor self-report, which placed CMT at the highest relative frequency rating of 3.86/4. Chiropractors reported providing therapeutic exercise, self-management, and patient education at high frequencies, yet CPT® codes for these therapies were rare.

Conclusion: There is some agreement and much discrepancy between VHA chiropractors' report of practice characteristics and VHA EHR data. Additional work is needed to better understand the extent of documentation agreement, and its impact on patient and system outcomes. *(J Contemporary Chiropr 2021;4:90-98)*

Key Indexing Terms: Chiropractic; Veterans Health Administration; Utilization

INTRODUCTION

Electronic health records (EHRs) allow comprehensive consolidation of patient medical data into digital files that can be accessed in real time to help improve patient management and communication between providers. (1) EHRs are a vital part of health information technology, containing large aggregates of longitudinal patient information such as medical history, test results, medications, chart notes and clinical codes.

Healthcare systems regularly use administrative codes to classify diagnoses of patients seen and healthcare services delivered to those patients. Internationally recognized coding schemas such as Current Procedural Terminology® (CPT®) codes and International

[1] *Department of Physical Medicine & Rehabilitation, VA Connecticut Healthcare System, West Haven, CT*
[2] *Yale Center for Medical Informatics, Yale School of Medicine, New Haven, CT*
[3] *Department of Physical Medicine & Rehabilitation, WG Hefner VA Medical Center, Salisbury, NC*

Classification of Diseases, Tenth Revision (IDC-10) codes are used to identify services and diagnoses respectively. (2) In the last decade, such coding data stored in EHRs have been routinely harvested for large-scale analysis to assess system performance and quality of care (3) despite various degrees of reported inaccuracy and incompleteness. (4)

The Veterans Health Administration (VHA) has utilized an EHR for decades and much has been published on VHA EHR data, (5) providing an ideal setting to study EHR accuracy in various user populations in VHA. Particularly, since VHA began including chiropractic services in 2004, it has offered a unique opportunity to explore the use of EHRs by chiropractors in the largest integrated hospital system in the US. (6) To the best of our knowledge, agreement between EHR coding and provider report of chiropractic visits has not been reported. The purpose of this study is to compare VHA chiropractors' self-reports of the most common conditions seen and services provided with national EHR data from VHA chiropractic visits.

METHODS

We conducted a cross-sectional analysis of VA administrative data for all on-station chiropractic visits from fiscal year (FY) 2019 (October 1, 2018 through September 30, 2019). This date range was selected to coincide with the timeframe of the previous VHA Doctor of Chiropractic (DC) provider survey described below. This was a program analysis project using the VHA Chiropractic Program Office's operational data dashboard. Data were extracted from the VHA Corporate Data Warehouse (CDW). Chiropractic visits were identified based on any visit to a clinic coded as a chiropractic clinic, defined by VHA stop code 436 in either the primary or secondary position. All ICD-10 and CPT® codes associated with a chiropractic visit in FY 2019 were extracted, and the top 100 most frequently used of each were tabulated (Table 1). We collapsed these into representative categories for comparison, and calculated the proportion of codes falling into each category.

Additionally, we conducted a secondary analysis of data from a previous VA chiropractor survey to calculate relative frequencies of provider-reported diagnoses and procedures. This survey captured responses in a 5-item categorical scale of several per day, several per week, several per month, several per year, and never. We created a framework to translate these categorical responses to relative frequencies by assigning numerical converter values ranging from 4 to zero in descending order from most to least frequent. We then multiplied the number of survey responses for any given category by the numeric converter. The resulting values were then summed for each ICD-10 and CPT® survey question. This was applied to survey responses for conditions seen and treatments delivered.

Table 1. *Top 100 ICD-10 and CPT® codes associated with a VA chiropractic visit in FY 2019*

ICD Code	Cervical	ICD Count
M54.2	Cervicalgia	77,779
M99.01	Segmental and somatic dysfunction of cervical region	56,016
M50.30	Other cervical disc degeneration, unspecified cervical region	17,800
M99.81	Other biomechanical lesions of cervical region	16,271
M47.812	Spondylosis without myelopathy or radiculopathy, cervical region	10,141
M50.322	Other cervical disc degeneration at C5-C6 level	4,248
M47.892	Other spondylosis, cervical region	2,840
M50.323	Other cervical disc degeneration at C6-C7 level	2,200
M48.02	Spinal stenosis, cervical region	1,963
M50.321	Other cervical disc degeneration at C4-C5 level	1,309
M50.320	Other cervical disc degeneration, mid-cervical region, unspecified level	1,283
M79.12	Myalgia of auxiliary muscles, head and neck	1,259
M53.0	Cervicocranial syndrome	1,059
S16.1XXD	Strain of muscle, fascia and tendon at neck level, subsequent encounter	753
M50.90	Cervical disc disorder, unspecified, unspecified cervical region	674
Total		**195,595**

ICD Code	Thoracic/Ribs	ICD Count
M99.02	Segmental and somatic dysfunction of thoracic region	74,727
M54.6	Pain in thoracic spine	51,443
M99.82	Other biomechanical lesions of thoracic region	18,910

M51.34	Other intervertebral disc degeneration, thoracic region	7,768
M47.81	Spondylosis without myelopathy or radiculopathy, thoracic region	3,877
M99.88	Other biomechanical lesions of rib cage	2,261
Total		**158,986**

ICD Code	Lumbosacral/Pelvic	ICD Count
M54.5	Low back pain	149,081
M99.03	Segmental and somatic dysfunction of lumbar region	79,728
M51.36	Other intervertebral disc degeneration, lumbar region	46,738
M99.05	Segmental and somatic dysfunction of pelvic region	36,725
M99.04	Segmental and somatic dysfunction of sacral region	35,588
M51.37	Other intervertebral disc degeneration, lumbosacral region	21,056
M99.83	Other biomechanical lesions of lumbar region	20,807
M99.84	Other biomechanical lesions of sacral region	12,805
M62.830	Muscle spasm of back	8,375
M47.816	Spondylosis without myelopathy or radiculopathy, lumbar region	8,093
M99.85	Other biomechanical lesions of pelvic region	8,062
M47.817	Spondylosis without myelopathy or radiculopathy, lumbosacral region	5,362
M47.896	Other spondylosis, lumbar region	5,055
M48.07	Spinal stenosis, lumbosacral region	3,736
M51.26	Other intervertebral disc displacement, lumbar region	3,294
M43.16	Spondylolisthesis, lumbar region	3,271
M48.061	Spinal stenosis, lumbar region without neurogenic claudication	2,458
M54.9	Dorsalgia, unspecified	1,946
M46.1	Sacroiliitis, not elsewhere classified	1,762
S33.6XXA	Sprain of sacroiliac joint, initial encounter	1,570
S33.6XXD	Sprain of sacroiliac joint, subsequent encounter	1,253
S39.012D	Strain of muscle, fascia and tendon of lower back, subsequent encounter	1,132
M51.86	Other intervertebral disc disorders, lumbar region	1,131
S33.5XXD	Sprain of ligaments of lumbar spine, subsequent encounter	1,034
M99.13	Subluxation complex (vertebral) of lumbar region	956
S33.5XXA	Sprain of ligaments of lumbar spine, initial encounter	925
M51.27	Other intervertebral disc displacement, lumbosacral region	925
M51.35	Other intervertebral disc degeneration, thoracolumbar region	841
M47.815	Spondylosis without myelopathy or radiculopathy, thoracolumbar region	776
M51.06	Intervertebral disc disorders with myelopathy, lumbar region	765
M43.17	Spondylolisthesis, lumbosacral region	738
M53.86	Other specified dorsopathies, lumbar region	647
Total		**466,635**

ICD Code	Upper Extremity	ICD Count
M25.511	Pain in right shoulder	3,003
M25.512	Pain in left shoulder	2,572
M99.07	Segmental and somatic dysfunction of upper extremity	2,154
M25.519	Pain in unspecified shoulder	932
Total		**8,661**

ICD Code	Lower Extremity	ICD Count
M99.06	Segmental and somatic dysfunction of lower extremity	4,267
M25.551	Pain in right hip	2,499

M25.552	Pain in left hip	1,976
M99.86	Other biomechanical lesions of lower extremity	1,420
M25.561	Pain in right knee	1,411
M25.562	Pain in left knee	1,072
M25.569	Pain in unspecified knee	851
M25.559	Pain in unspecified hip	698
M76.02	Gluteal tendinitis, left hip	655
M76.01	Gluteal tendinitis, right hip	654
Total		**15,503**

ICD Code	Other	ICD Count
M79.10	Myalgia, unspecified site	28,434
M62.838	Other muscle spasm	18,596
M79.18	Myalgia, other site	7,983
G89.29	Other chronic pain	6,988
G89.4	Chronic pain syndrome	3,834
R29.3	Abnormal posture	2,821
M79.7	Fibromyalgia	1,876
M96.1	Post laminectomy syndrome, not elsewhere classified	1,416
M47.819	Spondylosis without myelopathy or radiculopathy, site unspecified	1,215
M60.9	Myositis, unspecified	1,169
F43.12	Post-traumatic stress disorder, chronic	1,081
M79.2	Neuralgia and neuritis, unspecified	1,000
M19.91	Primary osteoarthritis, unspecified site	862
E66.9	Obesity, unspecified	800
M41.9	Scoliosis, unspecified	777
Total		**78,852**

ICD Code	Headache	ICD Count
R51.0	Headache	7,559
G44.229	Chronic tension-type headache, not intractable	1,036
G43.009	Migraine without aura, not intractable, without status migrainosus	997
Total		**9,592**

ICD Code	Cervical w/ Radiculopathy	ICD Count
M54.12	Radiculopathy, cervical region	8,101
G54.0	Brachial plexus disorders	2,222
M47.22	Other spondylosis with radiculopathy, cervical region	854
M50.122	Cervical disc disorder at C5-C6 level with radiculopathy	785
Total		**11,962**

ICD Code	Lumbar w/ Radiculopathy	ICD Count
M54.16	Radiculopathy, lumbar region	9,642
M54.17	Radiculopathy, lumbosacral region	6,454
M54.31	Sciatica, right side	2,208
M51.16	Intervertebral disc disorders with radiculopathy, lumbar region	3,837
M54.32	Sciatica, left side	2,061
M47.26	Other spondylosis with radiculopathy, lumbar region	1,956
M51.17	Intervertebral disc disorders with radiculopathy, lumbosacral region	1,721
M48.062	Spinal stenosis, lumbar region with neurogenic claudication	1,607
M47.27	Other spondylosis with radiculopathy, lumbosacral region	1,101
M54.41	Lumbago with sciatica, right side	1,073
M54.42	Lumbago with sciatica, left side	1,023
Total		**32,683**

CPT Code	New Patient/ Consult	Procedure Count
99203	OFFICE/OUTPATIENT VISIT NEW	12,548
99243	OFFICE CONSULTATION	7,927

99202	OFFICE/OUTPATIENT VISIT NEW	6,698
99204	OFFICE/OUTPATIENT VISIT NEW	4,843
99242	OFFICE CONSULTATION	4,240
99201	OFFICE/OUTPATIENT VISIT NEW	2,023
99241	OFFICE CONSULTATION	1,991
99244	OFFICE CONSULTATION	1,180
99451	NTRPROF PH1/NTRNET/EHR 5/>	490
97162	PT EVAL MOD COMPLEX 30 MIN	338
99205	OFFICE/OUTPATIENT VISIT NEW	251
99245	OFFICE CONSULTATION	53
76140	X-RAY CONSULTATION	22
97161	PT EVAL LOW COMPLEX 20 MIN	13
97165	OT EVAL LOW COMPLEX 30 MIN	12
Total		**42,629**

CPT Code	Establish Px	Procedure Count
99212	OFFICE/OUTPATIENT VISIT EST	43,967
99211	OFFICE/OUTPATIENT VISIT EST	16,947
99213	OFFICE/OUTPATIENT VISIT EST	14,249
99214	OFFICE/OUTPATIENT VISIT EST	1,527
99441	PHONE E/M PHYS/QHP 5-10 MIN	181
99447	NTRPROF PH1/NTRNET/EHR 11-20	109
99446	NTRPROF PH1/NTRNET/EHR 5-10	94
98969	ONLINE SERVICE BY HC PRO	84
99499	UNLISTED E&M SERVICE	69
99368	TEAM CONF W/O PAT BY HC PRO	63
99442	PHONE E/M PHYS/QHP 11-20 MIN	37
99215	OFFICE O/P EST HI 40-54 MIN	24
98966	HC PRO PHONE CALL 5-10 MIN	18
99366	TEAM CONF W/PAT BY HC PROF	16
99354	PROLNG SVC O/P 1ST HOUR	11
99443	PHONE E/M PHYS/QHP 21-30 MIN	11
99444	ONLINE E/M BY PHYS/QHP	9
99448	NTRPROF PH1/NTRNET/EHR 21-30	8
Total		**77,424**

CPT Code	CMT	Procedure Count
98941	CHIROPRACT MANJ 3-4 REGIONS	130,165
98940	CHIROPRACT MANJ 1-2 REGIONS	117,875
98943	CHIROPRACT MANJ XTRSPINL 1/>	21,460
98942	CHIROPRACTIC MANJ 5 REGIONS	5,203
98925	OSTEOPATH MANJ 1-2 REGIONS	9
98926	OSTEOPATH MANJ 3-4 REGIONS	7
Total		**274,719**

CPT Code	Physical Medicine, Modalities	Procedure Count
97012	MECHANICAL TRACTION THERAPY	32,587
97010	HOT OR COLD PACKS THERAPY	30,564
97014	ELECTRIC STIMULATION THERAPY	7,510
97026	INFRARED THERAPY	4,894
97032	ELECTRICAL STIMULATION	3,968
G0283	ELEC STIM OTHER THAN WOUND	2,396
97035	ULTRASOUND THERAPY	1,556
S8948	LOW-LEVEL LASER TRMT 15 MIN	1,024
97039	PHYSICAL THERAPY TREATMENT	378
E0720	TENS TWO LEAD	96
S8930	AURICULAR ELECTROSTIMULATION	91

64550	APPL SURFACE NEUROSTIMULATOR	17
97028	ULTRAVIOLET THERAPY	13
97036	HYDROTHERAPY	10
Total		**85,104**

CPT Code	Physical Medicine, Other	Procedure Count
97140	MANUAL THERAPY 1/> REGIONS	65,968
97124	MASSAGE THERAPY	22,613
97799	PHYSICAL MEDICINE PROCEDURE	233
29240	STRAPPING OF SHOULDER	171
29530	STRAPPING OF KNEE	109
29200	STRAPPING OF CHEST	100
29540	STRAPPING OF ANKLE AND/ OR FT	27
L0628	LSO FLEX NO RI STAYS PRE OTS	27
29520	STRAPPING OF HIP	26
95992	CANALITH REPOSITIONING PROC	21
97139	PHYSICAL MEDICINE PROCEDURE	17
29260	STRAPPING OF ELBOW OR WRIST	16
Total		**89,328**

CPT Code	Exercise	Procedure Count
97110	THERAPEUTIC EXERCISES	21,014
97112	NEUROMUSCULAR REEDUCATION	3,513
97530	THERAPEUTIC ACTIVITIES	369
97150	GROUP THERAPEUTIC PROCEDURES	345
97116	GAIT TRAINING THERAPY	227
A9300	EXERCISE EQUIPMENT	7
Total		**25,475**

CPT Code	Education	Procedure Count
98960	SELF-MGMT EDUC & TRAIN 1 PT	4,686
97535	SELF CARE MNGMENT TRAINING	2,548
S9445	PT EDUCATION NOC INDIVID	468
97761	PROSTHETIC TRAING 1ST ENC	247
96153	INTERVENE HLTH/BEHAVE GROUP	186
98961	SELF-MGMT EDUC/TRAIN 2-4 PT	74
97804	MEDICAL NUTRITION GROUP	65
99406	BEHAV CHNG SMOKING 3-10 MIN	65
99078	GROUP HEALTH EDUCATION	55
98962	SELF-MGMT EDUC/TRAIN 5-8 PT	46
97760	ORTHOTIC MGMT&TRAING 1ST ENC	45
97537	COMMUNITY/WORK REINTEGRATION	39
S9446	PT EDUCATION NOC GROUP	30
99403	PREVENTIVE COUNSELING INDIV	29
97763	ORTHC/PROSTC MGMT SBSQ ENC	18
99401	PREVENTIVE COUNSELING INDIV	13
Total		**8,614**

CPT Code	Acupuncture	Procedure Count
97810	ACUPUNCT W/O STIMUL 15 MIN	22,860
97811	ACUPUNCT W/O STIMUL ADDL 15M	9,521
97813	ACUPUNCT W/STIMUL 15 MIN	3,063
97814	ACUPUNCT W/STIMUL ADDL 15M	1,947
Total		**37,391**

CPT Code	Miscellaneous	Procedure Count
20999	MUSCULOSKELETAL SURGERY	2,092

90686	IIV4 VACC NO PRSV 0.5 ML IM	166
3324F	MRI CT SCAN ORD RVWD RQSTD	88
2010F	VITAL SIGNS RECORDED	75
90656	IIV3 VACC NO PRSV 0.5 ML IM	71
90653	IIV ADJUVANT VACCINE IM	22
90688	IIV4 VACCINE SPLT 0.5 ML IM	9
90658	IIV3 VACCINE SPLT 0.5 ML IM	8
Total		**2,531**

RESULTS

We identified 66,666 unique patients who received 301,739 on-station chiropractic visits during the study timeframe.

The top 100 ICD-10 codes for these visits encompassed 94.05% of all ICD-10 codes in FY 2019. These were collapsed into 9 categories, presented in Figure 1. The most frequent diagnoses were LBPwo (47.7%) followed by NPwo (20%). The results of our analysis of provider survey responses to conditions seen are presented in Figure 2. The most common conditions from provider self-report were also LBPwo and NPwo.

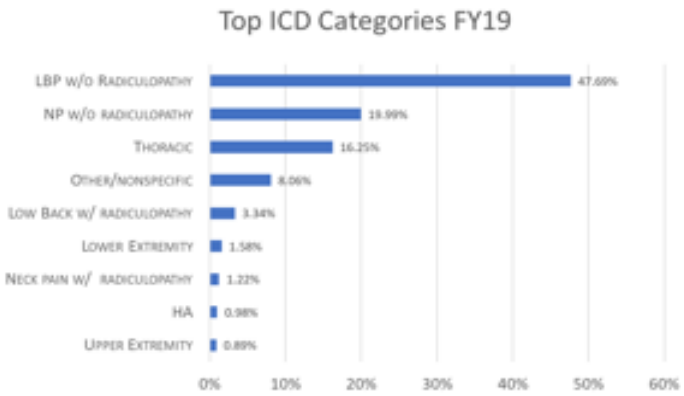

Figure 1. *The top 100 ICD-10 codes were organized into the categories of low back pain (LBP) without radiculopathy (LBPwo), LBP with radiculopathy, neck pain (NP) without radiculopathy (NPwo), NP with radiculopathy, thoracic pain, upper extremity pain, lower extremity pain, headaches (HA), and other, and the proportion of the top 100 ICD-10 codes that fit into each category was calculated.*

The top 100 CPT® codes accounted for 99.96% of all procedural conde in FY2019. We collapsed these into 9 categories, presented in Figure 3. The most common procedures were CMT (42.7%) and manual therapy procedures (13.9%). The results of our analysis of provider survey responses regarding services provided are

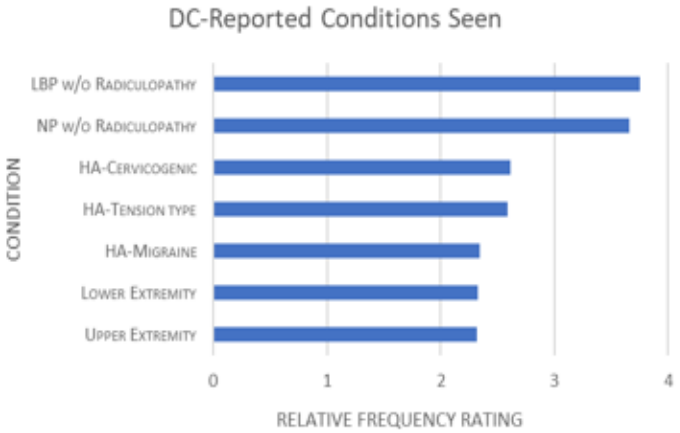

Figure 2. *LBP = Low Back Pain, NP= Neck Pain, HA = Headache*

presented in Figure 4. The most common therapies from provider self-report were CMT and therapeutic exercise. The survey did not measure E&M services.

DISCUSSION

This work presents a preliminary analysis of chiropractic clinical coding and provider self-reported practice characteristics in the largest US integrated healthcare system.

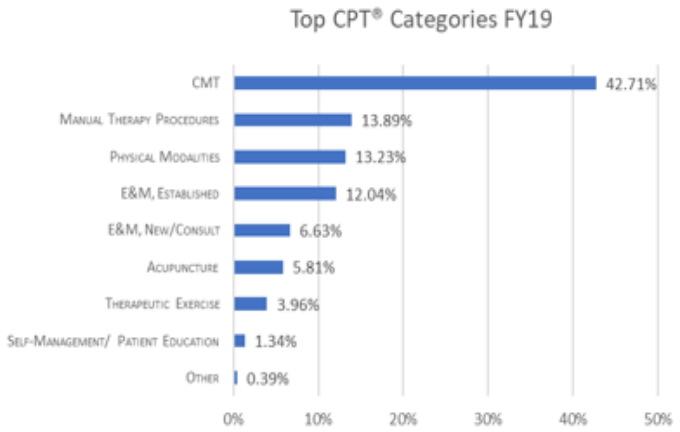

Figure 3. *The top 100 CPT® code were organized into the categories of evaluation and management (E&M) for a new patient or consultation, E&M for an established patient, chiropractic manipulative therapy (CMT), manual therapy procedures, physical modalities (hot/cold packs, E-stim, TENS, INFARED, etc.) , therapeutic exercises, self-management/patient education, acupuncture, and other, and the proportion of the top 100 CPT® codes that fit into each category was calculated.*

LBPwo was the most frequent ICD-10 code in administrative data (47.7%) and was also rated the most common condition seen by provider self-report (3.75/4 relative frequency). The frequency of ICD-10 codes for

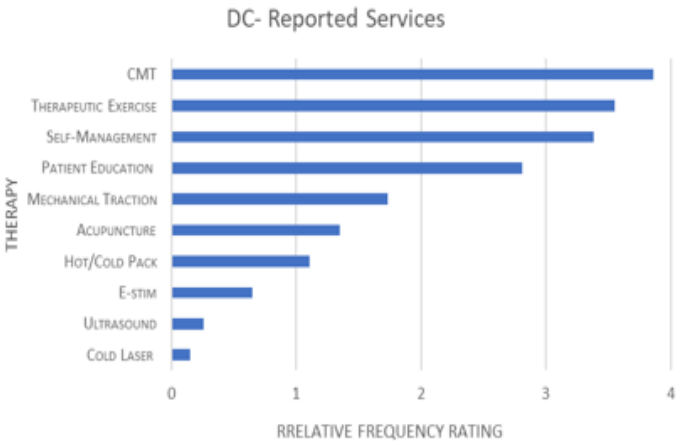

Figure 4. *CMT= chiropractic manipulative therapy, E&M = establishment and management*

NPwo (19.99%) was less than half of that for LBPwo, yet DCs' self-reported NPwo relative frequency (3.66/4) was essentially the same as LBPwo. Even greater disparity existed between the very low frequencies of ICD codes for headache and extremity conditions, and the relatively higher rates at which DCs report seeing these conditions. A scoping review by Beliveau of worldwide chiropractic utilization found the most common reasons for chiropractic care were LBP (49.7%), NP (22.5%), extremity conditions (10.0%), and headaches (5.5%), with these proportions being most consistent with the EHR data from our study and not provider self-report. (7) Our EHR data is also largely consistent with prior reports of conditions seen by VA chiropractors. (6)

The most frequent CPT® code grouping in administrative data was CMT, representing 42.7% of all CPT® codes. This was concordant with DC self-report placing CMT at the highest relative frequency rating of 3.86/4. This is also consistent with chiropractic practice worldwide, with CMT being the most frequent service provided. (7) DCs reported providing therapeutic exercise, self-management, and patient education at relatively high frequencies, yet CPT® codes for these therapies were very rare. The proportions of therapeutic codes presented in this study are similar to prior reports of services provided by VA chiropractors. (6) Our work demonstrates use of Evaluation and Management (E&M) codes was common, but we could not assess provider self-report of E&M services since these were not included in the DC survey.

The discrepancy demonstrated between chiropractors' coding and self-report of conditions seen and treatments delivered is not surprising, as other studies have demonstrated disagreement in other healthcare disciplines. (4,8) A study looking at whether a goals of care discussion occurred during a clinic visit found considerable disagreement between patient report, clinician report, and EHR documentation. (9) In this study, of the 3 methods evaluated, only patient-report of the occurrence of a discussion was associated with patient-reported receipt of goal-concordant care. Though our study does not allow direct assessment of whether EHR or provider self-report more accurately represents VHA chiropractic patient visit characteristics, a previous study of pain-related primary care encounters found that documentation of pain care procedures in EHRs significantly underrepresented the actual pain management delivered by physicians during office visits. (8)

Despite well-documented inaccuracy, EHR data continues to be used for healthcare research and quality of care assessment. A project looking at 150 randomly selected MEDLINE-cited administrative database research studies which used diagnostic or procedural codes as key study variables, sought to measure the proportion of the studies which accounted for coding accuracy. The study concluded that diagnostic and procedural codes were commonly used but infrequently validated, and furthermore, subjects in administrative data studies with a code frequently did not have the condition it represents. (10)

Nevertheless, administrators and researchers are increasingly using VHA EHR data to examine system performance, pain management practices, and quality of care. This may be because EHR contains aggregate information on a large sample of individuals which allow stakeholders to evaluate outcomes across a wider range of settings, geographical region, and patients. (5) It has also been reported, that the use of EHR data for research may be less expensive and time consuming, as well as reduce the potential for participant risk and burnout. (5) However if EHR data are demonstrated to be inaccurate or incomplete, inferences made regarding healthcare delivery based on such data may be limited. It was beyond the scope of our study to measure whether clinical coding or provider self-report is more accurate. Further assessment is needed to determine if VHA chiropractor coding accurately reflects clinical practice.

Limitations

There are limitations to our work as EHR data are subject to variations in provider use of clinical coding. Additionally, we analyzed ICD-10 and CPT® codes for all VHA chiropractic visits, and did not attempt to assess codes assigned to the patient visits of the chiropractors who completed the DC survey. We used an untested process to calculate relative frequencies of diagnoses and procedures reported in a prior DC survey. Other studies have used direct observation and patient and provider interviews at points of care as a means of assessing what occurred during patient visits. (4) (1) Little is known about how these three approaches compare to each other and previous studies suggest significant differences regarding provider and patient report of what occurred

during visits. (9) (11) Although direct observation via audio or video-recording patient encounters may be the most transparent method, it is also invasive and resource-consuming. (12) Future work should include a more rigorous assessment of patient visit characteristics, including patient and/or provider interviews at the point of care, for comparison with EHR coding.

CONCLUSION

This study describes areas of concordance and divergence between VHA chiropractor self-report of practice characteristics and EHR clinical coding data. Given the significance of EHR documentation to patient management, interdisciplinary team communication, and allocation of health resources, discrepancies between actual care and EHR data may have negative impacts. Additional work is needed to better understand VA chiropractor clinical coding and its impact on patient and system outcomes.

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