Division of Medicaid
Office of the Governor
State of Mississippi
Drug Utilization Review (DUR) Board Meeting

MISSISSIPPI DIVISION OF
MEDICAID

September 20, 2018 at 2:00pm

Woolfolk Building, Room 145

Jackson, MS

Prepared by:

MS | DUR Evidence-Based DUR Initiative
The University of Mississippi School of Pharmacy

Drug Utilization Review Board

Lauren Bloodworth, PharmD
University of MS School of Pharmacy
201D Faser Hall
University, MS 38677
Term Expires: June 30, 2021

Beverly Bryant, MD
UMMC, School of Medicine
2500 North State Street
Jackson, MS 39216
Term Expires: June 30, 2021

Rhonda Dunaway, RPh
Coastal Family Health Center
9113 Hwy 49 Suite 200
Gulfport, MS 39503
Term Expires: June 30, 2020

Tanya Fitts, MD
Lafayette Pediatric Clinic
1300 Access Road, Suite 400
Oxford, MS 38655
Term Expires: June 30, 2021

Juanice Glaze, RPh
New Pointe Pharmacy
345 General Robert E Blount Dr.
Bassfield, MS 39421
Term Expires: June 30, 2019

Alice F. Messer, FNP-BC
Newsouth Neurospine
2470 Flowood Drive
Flowood, MS 39232
Term Expires: June 30, 2019

Ray Montalvo, MD
KDMC Specialty Clinic
940 Brookway Boulevard
Brookhaven, MS 39601
Term Expires: June 30, 2020

Holly R. Moore, PharmD
Anderson Regional Medical Center
2124 14th Street
Meridian, MS 39301
Term Expires: June 30, 2020

Janet Ricks, DO
UMMC, Family Medicine
2500 North State Street
Jackson, MS 39216
Term Expires: June 30, 2021

Dennis Smith, RPh
Polk's Discount Drugs
1031 Star Rd
Brandon, MS 39042
Term Expires: June 30, 2020

James Taylor, PharmD **(Chair)**
North MS Medical Center
830 S. Gloster Street
Tupelo, MS 38801
Term Expires: June 30, 2019

Veda Vedanarayanan, MD
Mississippi Center for Advanced Medicine
7731 Old Canton Road, Suite B
Madison, MS 39110
Term Expires: June 30, 2021

2018 DUR Board Meeting Dates

March 1, 2018
May 31, 2018
September 20, 2018
December 6, 2018

As with any analysis, great efforts are made to ensure that the information reported in this document is accurate. The most recent administrative claims data available are being used at the time the reports are generated, which includes the most recent adjudication history. As a result, values may vary between reporting periods and between DUR Board meetings, reflecting updated reversals and claims adjustments.

Unless otherwise indicated, all MS-DUR analyses are conducted for the entire Mississippi Medicaid program including beneficiaries receiving services through the Medicaid fee-for-service (FFS) and the two Mississippi Medicaid Coordinated Care Organizations (CCOs). When dollar figures are reported, the reported dollar figures represent reimbursement amounts paid to providers and are not representative of final Medicaid costs after rebates. Any reported enrollment data presented are unofficial and are only for general information purposes for the DUR Board.

Please refer to the Mississippi Division of Medicaid website for the current official Universal Preferred Drug List (PDL).

http://www.medicaid.ms.gov/providers/pharmacy/preferred-drug-list/

MISSISSIPPI DIVISION OF MEDICAID
OFFICE OF THE GOVERNOR
DRUG UTILIZATION REVIEW BOARD
AGENDA
September 20, 2018

Welcome — James Taylor, PharmD (Chair)

Old Business — James Taylor, PharmD
- Approval of May 2018 Meeting Minutes — page 5

Resource Utilization Review

Pharmacy Program Update — Terri Kirby, RPh; Sara (Cindy) Noble, PharmD, MPH

DUR Board Role/Responsibilities

Update on Action Items from Previous Board Meeting(s)

Sickle Cell Disease — Spencer Sullivan, MD; Sharon Pennington, MD

Stimulant Prescriptions and Diagnosis Requirement

Feedback and Discussion from the Board

New Business

Update on MS-DUR Educational Interventions — page 22

Special Analysis Projects

Next Meeting Information — James Taylor, PharmD

DUR Board Meeting Minutes

MISSISSIPPI DIVISION OF MEDICAID
DRUG UTILIZATION REVIEW (DUR) BOARD
MINUTES OF THE MAY 31, 2018 MEETING

ATTENDANCE SFY2018

DUR Board Members:	July 2017	Nov 2017	Mar 2018	May 2018
Allison Bell, PharmD	✓	✓	NA	NA
Rhonda Dunaway, RPh		✓	✓	✓
Craig Escudé, MD	✓		✓	NA
Juanice Glaze, RPh		✓	✓	✓
Alice Messer, DNP, FNP-BC	✓	✓	✓	✓
Ray Montalvo, MD	NA	✓	✓	✓
Holly Moore, PharmD	NA		✓	
Janet Ricks, DO		✓	✓	
Sue Simmons, MD		✓		✓
Dennis Smith, RPh	NA		✓	✓
James Taylor, PharmD (Chair)		✓	✓	✓
Pearl Wales, PharmD	✓	✓		✓
TOTAL PRESENT	**4***	**9**	**9****	**8*****

**Only 8 members were active due to new appointments to DUR Board not being approved by Governor prior to meeting.*
*** Only 11 members were active due to resignation resulting from move and replacement not yet approved by Governor.*
**** Only 10 members were active due to resignations resulting from move and replacements not yet approved by Governor.*

Also Present:

Division of Medicaid (DOM) Staff:
Cindy Noble, PharmD, MPH, DUR Coordinator; Gail McCorkle, RPh, Clinical Pharmacist; Chris Yount, MA, PMP, Staff Officer – Pharmacy; Drew Snyder, JD, Executive Director; Anita Smith, RN; Shereen Wilson, RN, Clinical Support Services; Darlene Touchet, RN; Sue Reno, RN, Program Integrity

University of Mississippi School of Pharmacy - MS-DUR Staff:
Ben Banahan, PhD, MS-DUR Project Director; Eric Pittman, PharmD, MS-DUR Clinical Director; Anna Crider, University of Mississippi School of Pharmacy Student; Mariah Cole, University of Mississippi School of Pharmacy Student

Conduent Staff:
Leslie Leon, PharmD, Clinical Pharmacist, Mississippi Medicaid Project; Lew Anne Snow, RN, BSN, Pharmacy Services Sr. Analyst, Mississippi Medicaid Project; Felecia Lobrano, RN, Professional Services Sr. Analyst

Change Healthcare Staff:
Shannon Hardwick, RPh, CPC Pharmacist; Cheryl Rogers, PharmD, Mississippi PA Pharmacist; Paige Clayton, PharmD, On-Site Clinical Pharmacist

Coordinated Care Organizations:
Heather Odem, PharmD, United Healthcare Community & State, Director of Pharmacy- Mississippi; Conor Smith, MS, RPh, Director of Pharmacy, Magnolia Health; Mike Todaro, PharmD, Vice President, Pharmacy Operations, Magnolia Health

Visitors:
Phil Hecht, Abbvie; Kent Ulveling, Abbvie; Dan Doyle, Trividia; Leigh Faircloth, Johnson and Johnson; Steven Zona, Johnson and Johnson; Tim Hambacher, Otsuka; Jason Swartz, Otsuka; Judy Clark, Consultant; Angela Brown, BI; David Seel, BI; Jay Breyner, BI; Steve Curry, ALK; Darlene Bitel, Shire; Doug Welch, Merck; Beverly Bryant, MD, UMMC; Lauren Bloodworth, PharmD, University of Mississippi School of Pharmacy

Call to Order:
Dr. Taylor, Chair, called the meeting to order at 2:02pm and welcomed everyone. Dr. Taylor and Dr. Noble, on behalf of Medicaid, recognized Dr. Janet Ricks, Dr. Pearl Wales and Dr. Sue Simmons, whose terms are expiring June 2018, and thanked them for their service and contributions to the DUR Board.

Old Business:
Dr. Taylor moved to approve the minutes from the March 2018 DUR Board Meeting, seconded by Dr. Montalvo and unanimously approved by the DUR Board.

Resource Utilization Review:
Dr. Pittman informed the board that encounter data for Magnolia was incomplete for February 2018 at the time the report was run. Although this should not impact any of the resource utilization ranks, it does impact the following: dollar amounts paid, number of claims, and number of beneficiaries for the month of February. In reference to top categories by volume or dollars, no unexpected shifts were noted for this time of year. Dr. Montalvo asked about trends in regards to narcotics and stimulants. Dr. Banahan indicated a trend analysis was planned for the next DUR Board Meeting.

Pharmacy Program Update:
Dr. Noble updated the Board on the progress of some opioid initiatives stating that DOM is trying to be in alignment with new regulations under development from the State Medical Licensure Board regarding opioid prescribing. She informed the board that DOM is moving forward on the clinical edits to implement the Board's recommendations for concomitant use of opioids and benzodiazepines. Dr. Noble asked Ms. Reno, DOM Program Integrity, to provide an update on activities in their division. Dr. Noble also informed the Board that the Federal Fiscal Year 2017 Medicaid Drug Utilization Review Annual Report due to CMS by June 30, 2018 is being finalized. She briefed the Board on pharmacy related changes in the Medicaid Technical Bill that was recently passed by the legislature and signed by the governor. Mrs. McCorkle gave an update on NADAC reimbursement reprocessing with an expected completion at the end of July 2018.

N**EW BUSINESS**

Feedback and Discussion from the Board
Dr. Pittman asked if any board members had items they wanted to call to the attention of DOM or MS-DUR. Dr. Noble updated the Board on the status of some recent DUR Board decisions. Changes related to the stimulant edits approved by the Board are tentatively scheduled for an October 2018 implementation and the Proton Pump Inhibitor edits are tentatively scheduled for January 2019 implementation. Dr. Montalvo asked if DOM could look into access to the PCSK9 inhibitor drug class. Dr. Noble informed the Board that DOM has criteria in place for this class, but requested Dr. Montalvo review this criteria. Mr. Smith inquired about gabapentin utilization. Board members discussed recent DUR action on this class and the potential for the Mississippi Board of Pharmacy to move gabapentin to a controlled substance.

Election of Officer
Dr. Messer nominated Dr. Montalvo as Co-Chair, seconded by Dr. Simmons and passed unanimously.

Update on MS-DUR Educational Interventions
Dr. Pittman provided an overview of educational mailings that were conducted during the last quarter.

Research Reports:
Stimulants and Associated Diagnoses for Clinical Edit
At the March 2018 DUR Board meeting a recommendation was approved to implement diagnosis edits for stimulants in both children and adults. Dr. Pittman presented an overview of follow-up analyses conducted by MS-DUR regarding the presence of approved diagnoses for past stimulant prescriptions. Following a robust discussion, the following recommendations were made by the DUR Board:

1. DOM should implement an electronic prior authorization procedure requiring the presence of at least one of the listed FDA approved or compendia supported diagnoses for each stimulant product. This diagnosis can be present in the medical claims paid within 24 months of the prescription fill or written on the prescription by the provider and submitted by the pharmacist with the prescription claim. (NOTE: The DUR Board has already approved such an edit, this is a confirmation of the approved indications that will be listed for each product.)

Dr. Taylor moved to accept recommendation number 1 as approved at the March 2018 DUR Board meeting. The motion was seconded by Dr. Montalvo and approved unanimously.

Prior to Implementation of the Edit:

2. MS-DUR will initiate an educational mailing to inform providers about the diagnosis requirement and will work with the Mississippi Chapter of the American Academy of Pediatrics, Mississippi Psychiatric Association, Mississippi State Medical Association and other state professional medical, nursing and pharmacy associations to electronically disseminate information about the upcoming edit. DOM should seek to have these associations' endorsement of this notice if permissible.

Dr. Wales moved to approve recommendation number 2. The motion was seconded by Mr. Smith and approved unanimously.

3. DOM will include a notice about the upcoming edit in the upcoming Provider Bulletin(s).

Ms. Dunaway moved to approve recommendation number 3. The motion was seconded by Dr. Montalvo and approved unanimously.

Pharmacotherapeutic Management of Sickle Cell Disease (SCD)
Dr. Pittman provided a review of SCD treatment and the recent approval of Endari for treatment of SCD related pain. He reviewed the MS-DUR analysis on utilization of hydroxyurea and Endari. The Board indicated a desire to have a hematologist present to the board before taking action.

Motion to table action until after Board can have a presentation on SCD treatment was made by Dr. Messer, seconded by Dr. Montalvo and approved unanimously.

Makena Utilization in Mississippi Medicaid
MS-DUR was asked to examine utilization of Makena in response to prescriber feedback to DOM regarding difficulties in obtaining the product. Dr. Pittman provided a background on utilization of Makena and the findings from the MS-DUR analysis and interviews. After a robust discussion, the following recommendations were proposed by the DUR Board:

1. MS-DUR should share results with other health service office directors within Mississippi Medicaid who are examining access to Makena.
2. MS-DUR should assist in coordinating educational initiatives for providers and beneficiaries. Provider education should highlight benefits of prescribing Makena, outline the ordering process and stress the need for patient education regarding the confirmation phone call from the manufacturer that must be completed prior to initiation of treatment.
3. MS-DUR should work with AMAG Pharmaceuticals and other specialty pharmacies to coordinate additional education. The benefits of Makena and the ordering process for prescribers, especially those prescribers who may not be as familiar with the process, should also be addressed.

Mr. Smith made a motion to approve the recommendations, seconded by Dr. Taylor, and approved unanimously.

Palivizumab (Synagis) Utilization Update: 2015-16 through 2017-18 Seasons
Dr. Banahan gave a background on Synagis and the shift to using the CDC National Respiratory and Enteric Virus Surveillance System to determine the appropriate seasons for administration in each area. Dr. Banahan provided an overview report to the Board of the previous three RSV seasons in Mississippi and resultant Synagis utilization for DOM's beneficiaries. No action was required by the Board.

FDA Drug Safety Updates
Dr. Pittman reviewed FDA drug safety communications released from February 2018 – April 2018.

Additional Discussion
Dr. Noble distributed a notice from the Mississippi State Department of Health regarding the issuance of a state-wide standing order by Dr. Mary Currier, the Mississippi State Health Officer. This standing order permits pharmacists to dispense by request naloxone without a prescription from a physician or other practitioner.

Next Meeting Information:
Dr. Taylor announced the next meeting of the DUR Board will take place on September 20, 2018 at 2:00 p.m. He thanked everyone for their attendance and participation at the May 2018 DUR Board meeting.

The meeting adjourned at 3:41pm.

Submitted,

Eric Pittman, PharmD
Evidence-Based DUR Initiative, MS-DUR

PUBLIC MEETING NOTICES

Meeting Location: Woolfolk Building, 501 North West Street, Conference Room 145 Jackson, MS 39201

Contact Information: Pharmacy Bureau:
Chris Yount, 601-359-5253: Christopher.yount@medicaid.ms.gov, or
Jessica Tyson, 601-359-5253; Jessica.Tyson@medicaid.ms.gov

Notice details:

State Agency: MS Division of Medicaid

Public Body: Drug Utilization Board (DUR) Meeting

Subject: Quarterly Meeting

Date and Time: May 31, 2018 at 2PM; Sept. 20, 2018 at 2PM; Dec. 6, 2018 at 2PM.

Description: The Mississippi Division of Medicaid's Drug Utilization Review (DUR) Board is a quality assurance body which seeks to assure appropriate drug therapy to include optimal beneficiary outcomes and appropriate education for physicians, pharmacists, and the beneficiary. The Drug Utilization Review (DUR) Board is composed of twelve participating physicians and pharmacists who are active MS Medicaid providers and in good standing with their representative organizations.

The Board reviews utilization of drug therapy and evaluates the long-term success of the treatments.

The Drug Utilization Review (DUR) Board meets quarterly.

Resource Utilizaton Review

TABLE 04A: ENROLLMENT STATISTICS FOR LAST 6 MONTHS
January 1, 2018 through June 30, 2018

			Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Total enrollment			728,061	725,007	719,918	716,813	712,234	705,791
Dual-eligibles			156,710	156,349	156,065	155,964	155,593	155,212
Pharmacy benefits			618,199	615,122	610,887	607,706	603,637	597,279
	LTC		17,219	17,106	17,149	17,110	17,122	16,950
	PLAN %	**FFS**	23.9%	24.5%	25.2%	25.5%	25.2%	25.1%
		MSCAN-UHC	36.3%	36.0%	35.6%	35.4%	35.5%	35.5%
		MSCAN-Magnolia	39.8%	39.5%	39.2%	39.1%	39.3%	39.4%

TABLE 04B: PHARMACY UTILIZATION STATISTICS FOR LAST 6 MONTHS
January 1, 2018 through June 30, 2018

		Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
# Rx Fills	**FFS**	104,938	111,630	111,142	112,051	99,075	97,990
	MSCAN-UHC	202,415	193,759	181,081	181,365	173,270	152,764
	MSCAN-Mag	253,481	239,621	228,895	228,104	220,311	196,652
# Rx Fills / Bene	**FFS**	0.7	0.7	0.7	0.7	0.7	0.7
	MSCAN-UHC	0.9	0.9	0.8	0.8	0.8	0.7
	MSCAN-Mag	1.0	1.0	1.0	1.0	0.9	0.8
$ Paid Rx	**FFS**	$11,210,168	$12,220,150	$12,741,973	$12,784,108	$11,739,963	$11,287,446
	MSCAN-UHC	$16,621,796	$15,710,532	$15,265,515	$15,031,755	$14,842,639	$12,699,133
	MSCAN-Mag	$20,400,261	$18,867,317	$18,652,732	$18,325,014	$18,085,003	$16,778,889
$ /Rx Fill	**FFS**	$106.83	$109.47	$114.65	$114.09	$118.50	$115.19
	MSCAN-UHC	$82.12	$81.08	$84.30	$82.88	$85.66	$83.13
	MSCAN-Mag	$80.48	$78.74	$81.49	$80.34	$82.09	$85.32
$ /Bene	**FFS**	$75.87	$81.09	$82.77	$82.50	$77.18	$75.29
	MSCAN-UHC	$74.07	$70.95	$70.19	$69.87	$69.26	$59.89
	MSCAN-Mag	$82.91	$77.65	$77.89	$77.12	$76.23	$71.30

NOTE: Paid amounts represent amount reported on claims as paid to the pharmacy. These amounts do not reflect final actual costs after rebates, etc.

TABLE C: TOP 10 DRUG CATEGORIES BY NUMBER OF CLAIMS IN JUN 2018 (FFS AND CCOs)

Category	Month Year	Rank Volume	# RXs	$ Paid	# Unique Benes
CNS stimulants	Jun 2018	1	20,434	$4,338,946	17,747
	May 2018	1	24,565	$5,299,185	21,094
	Apr 2018	1	28,153	$6,069,005	24,486
narcotic analgesic combinations	Jun 2018	2	18,117	$643,329	16,515
	May 2018	2	18,342	$681,419	16,523
	Apr 2018	2	17,920	$653,514	16,410
nonsteroidal anti-inflammatory agents	Jun 2018	3	13,011	$185,498	12,424
	May 2018	6	13,512	$196,035	12,879
	Apr 2018	6	14,503	$215,163	13,882
adrenergic bronchodilators	Jun 2018	4	11,986	$849,015	10,439
	May 2018	4	14,401	$927,902	12,489
	Apr 2018	5	16,467	$1,043,952	14,364
atypical antipsychotics	Jun 2018	5	11,924	$1,286,948	10,498
	May 2018	7	12,528	$1,381,384	10,861
	Apr 2018	9	12,302	$1,359,014	10,881
antihistamines	Jun 2018	6	11,788	$182,000	11,428
	May 2018	3	14,933	$232,764	14,427
	Apr 2018	3	17,506	$266,876	16,975
SSRI antidepressants	Jun 2018	7	11,316	$133,407	10,654
	May 2018	9	11,721	$139,315	10,865
	Apr 2018	11	11,708	$139,462	11,038
aminopenicillins	Jun 2018	8	10,603	$132,171	10,437
	May 2018	5	14,261	$184,318	13,976
	Apr 2018	4	16,721	$212,480	16,440
proton pump inhibitors	Jun 2018	9	10,376	$370,703	10,037
	May 2018	11	10,613	$389,408	10,209
	Apr 2018	13	10,845	$388,135	10,500
leukotriene modifiers	Jun 2018	10	10,302	$187,611	10,103
	May 2018	8	12,302	$229,406	11,992
	Apr 2018	7	13,996	$259,861	13,745

TABLE D: TOP 10 DRUG CATEGORIES BY DOLLARS PAID IN JUN 2018 (FFS AND CCOs)

Category	Month Year	Rank Paid Amt	# RXs	$ Paid	# Unique Benes
CNS stimulants	Jun 2018	1	20,434	$4,338,946	17,747
	May 2018	1	24,565	$5,299,185	21,094
	Apr 2018	1	28,153	$6,069,005	24,486
insulin	Jun 2018	2	5,077	$2,656,912	3,774
	May 2018	3	5,134	$2,661,247	3,783
	Apr 2018	3	5,025	$2,580,437	3,744
antiviral combinations	Jun 2018	3	788	$2,392,108	750
	May 2018	2	846	$2,836,638	782
	Apr 2018	2	817	$2,692,678	774
antirheumatics	Jun 2018	4	1,049	$1,890,570	912
	May 2018	4	1,058	$1,801,663	906
	Apr 2018	5	1,054	$1,907,603	911
factor for bleeding disorders	Jun 2018	5	88	$1,835,086	69
	May 2018	5	107	$1,757,120	79
	Apr 2018	4	90	$2,086,028	72
atypical antipsychotics	Jun 2018	6	11,924	$1,286,948	10,498
	May 2018	6	12,528	$1,381,384	10,861
	Apr 2018	6	12,302	$1,359,014	10,881
gamma-aminobutyric acid analogs	Jun 2018	7	9,032	$1,151,734	8,457
	May 2018	8	9,140	$1,159,975	8,525
	Apr 2018	8	9,060	$1,182,494	8,494
bronchodilator combinations	Jun 2018	8	3,474	$1,079,059	3,212
	May 2018	9	3,576	$1,102,130	3,302
	Apr 2018	9	3,668	$1,124,558	3,403
adrenergic bronchodilators	Jun 2018	9	11,986	$849,015	10,439
	May 2018	10	14,401	$927,902	12,489
	Apr 2018	10	16,467	$1,043,952	14,364
narcotic analgesic combinations	Jun 2018	10	18,117	$643,329	16,515
	May 2018	12	18,342	$681,419	16,523
	Apr 2018	12	17,920	$653,514	16,410

TABLE E: TOP 25 DRUG MOLECULES
BY NUMBER OF CLAIMS IN JUN 2018 (FFS and CCOs)

Drug Molecule Therapeutic Category	May 2018 # Claims	Jun 2018 # Claims	Jun 2018 $ Paid	Jun 2018 # Unique Benes
acetaminophen-hydrocodone / narcotic analgesic combinations	12,698	12,568	$182,859	11,727
albuterol / adrenergic bronchodilators	13,759	11,275	$623,768	9,883
amoxicillin / aminopenicillins	14,183	10,522	$130,061	10,359
montelukast / leukotriene modifiers	12,301	10,301	$187,375	10,102
cetirizine / antihistamines	10,521	7,698	$102,575	7,596
gabapentin / gamma-aminobutyric acid analogs	7,586	7,485	$110,848	7,065
lisdexamfetamine / CNS stimulants	8,317	6,692	$1,940,144	6,550
amlodipine / calcium channel blocking agents	6,836	6,616	$59,742	6,399
omeprazole / proton pump inhibitors	5,857	5,763	$62,196	5,627
clonidine / antiadrenergic agents, centrally acting	6,007	5,659	$126,551	5,338
azithromycin / macrolides	8,777	5,535	$103,934	5,405
ibuprofen / nonsteroidal anti-inflammatory agents	5,885	5,459	$67,622	5,336
fluticasone nasal / nasal steroids	7,101	5,251	$74,100	5,207
amphetamine-dextroamphetamine / CNS stimulants	5,460	4,765	$249,969	4,097
methylphenidate / CNS stimulants	5,661	4,660	$1,074,478	4,209
sulfamethoxazole-trimethoprim / sulfonamides	4,526	4,523	$103,083	4,426
triamcinolone topical / topical steroids	4,656	4,499	$78,399	4,368
mupirocin topical / topical antibiotics	3,982	4,358	$69,675	4,266
ethinyl estradiol-norgestimate / contraceptives	4,102	4,182	$78,540	3,919
guanfacine / antiadrenergic agents, centrally acting	4,366	4,149	$84,759	3,958
ranitidine / H2 antagonists	4,138	3,994	$51,784	3,847
atorvastatin / HMG-CoA reductase inhibitors (statins)	4,016	3,983	$47,248	3,825
ondansetron / 5HT3 receptor antagonists	5,007	3,971	$62,036	3,868
metformin / biguanides	4,046	3,935	$43,526	3,744
lisinopril / angiotensin converting enzyme (ACE) inhibitors	4,084	3,917	$33,770	3,757

TABLE F: TOP 25 DRUG MOLECULES
BY DOLLARS PAID IN JUN 2018 (FFS and CCOs)

Drug Molecule Therapeutic Category	May 2018 $ Paid	Jun 2018 $ Paid	Jun 2018 # Claims	Jun 2018 # Unique Benes
lisdexamfetamine / CNS stimulants	$2,409,646	$1,940,144	6,692	6,550
adalimumab / antirheumatics	$1,146,297	$1,184,195	202	187
methylphenidate / CNS stimulants	$1,309,259	$1,074,478	4,660	4,209
antihemophilic factor / factor for bleeding disorders	$1,108,746	$880,338	29	23
insulin glargine / insulin	$834,898	$831,197	1,888	1,808
insulin aspart / insulin	$822,137	$830,098	1,436	1,353
pregabalin / gamma-aminobutyric acid analogs	$740,760	$733,328	1,521	1,474
dexmethylphenidate / CNS stimulants	$855,643	$701,217	2,630	2,191
albuterol / adrenergic bronchodilators	$727,032	$623,768	11,275	9,883
cobicistat/elvitegravir/emtricitabine/tenofov / antiviral combinations	$640,515	$582,780	209	204
anti-inhibitor coagulant complex / factor for bleeding disorders	$380,716	$577,840	4	3
lurasidone / atypical antipsychotics	$658,650	$564,114	433	403
fluticasone-salmeterol / bronchodilator combinations	$512,306	$498,706	1,278	1,254
etanercept / antirheumatics	$458,230	$497,081	107	94
sofosbuvir-velpatasvir / antiviral combinations	$590,195	$492,783	21	21
somatropin / growth hormones	$808,788	$484,338	119	113
insulin detemir / insulin	$420,671	$414,203	833	795
clobazam / benzodiazepine anticonvulsants	$419,168	$403,086	222	210
hydroxyprogesterone / progestins	$457,844	$398,637	121	113
budesonide-formoterol / bronchodilator combinations	$367,463	$374,792	1,206	1,190
ciprofloxacin-dexamethasone otic / otic steroids with anti-infectives	$248,697	$364,158	1,677	1,662
lacosamide / miscellaneous anticonvulsants	$370,176	$363,416	458	411
ivacaftor-lumacaftor / CFTR combinations	$420,749	$357,977	21	19
deferasirox / chelating agents	$1,197,261	$338,592	32	31
buprenorphine-naloxone / narcotic analgesic combinations	$347,669	$317,162	881	756

TABLE G: TOP 25 DRUG MOLECULES
BY CHANGE IN NUMBER OF CLAIMS FROM APR 2018 TO JUN 2018 (FFS and CCOs)

Drug Molecule	Apr 2018 # Claims	May 2018 # Claims	Jun 2018 # Claims	Jun 2018 $ Paid	Jun 2018 # Unique Benes
mupirocin topical / topical antibiotics	3,590	3,982	4,358	$69,675	4,266
ciprofloxacin-dexamethasone otic / otic steroids with anti-infectives	1,012	1,139	1,677	$364,158	1,662
hydrocortisone/neomycin/polymyxin b otic / otic steroids with anti-infectives	674	795	1,265	$82,124	1,251
ofloxacin otic / otic anti-infectives	124	208	321	$14,319	310
acetaminophen-oxycodone / narcotic analgesic combinations	3,101	3,197	3,240	$62,102	3,076
hydrocortisone topical / topical steroids	2,108	2,210	2,237	$47,942	2,210
multivitamin, prenatal / vitamin and mineral combinations	1,402	1,539	1,527	$55,858	1,512
acetaminophen-hydrocodone / narcotic analgesic combinations	12,451	12,698	12,568	$182,859	11,727
hydroxyzine / miscellaneous anxiolytics, sedatives and hypnotics	2,937	2,999	3,009	$46,016	2,932
betamethasone topical / topical steroids	224	286	289	$12,826	282
labetalol / beta blockers, non-cardioselective	466	504	531	$13,831	497
ethinyl estradiol-norethindrone / sex hormone combinations	1,697	1,662	1,760	$87,342	1,604
metformin / biguanides	3,872	4,046	3,935	$43,526	3,744
benztropine / anticholinergic antiparkinson agents	1,824	1,937	1,881	$26,171	1,754
chlorhexidine topical / mouth and throat products	616	566	673	$7,423	667
nifedipine / calcium channel blocking agents	874	926	930	$20,119	892
carbamazepine / dibenzazepine anticonvulsants	731	777	784	$65,159	739
furosemide / loop diuretics	2,239	2,405	2,292	$21,796	2,167
sulfamethoxazole-trimethoprim / sulfonamides	4,475	4,526	4,523	$103,083	4,426
insulin glargine / insulin	1,842	1,892	1,888	$831,197	1,808
silver sulfadiazine topical / topical antibiotics	158	193	204	$4,525	200
epinephrine / adrenergic bronchodilators	590	550	634	$197,476	633
ciclopirox topical / topical antifungals	103	124	147	$4,093	143
divalproex sodium / fatty acid derivative anticonvulsants	2,598	2,710	2,641	$86,222	2,316
fluticasone / inhaled corticosteroids	253	304	294	$61,974	293

TABLE H: TOP 25 DRUG MOLECULES
BY CHANGE IN AMOUNT PAID FROM APR 2018 TO JUN 2018 (FFS and CCOs)

Drug Molecule	Apr 2018 $ Paid	May 2018 $ Paid	Jun 2018 $ Paid	Jun 2018 # Claims	Jun 2018 # Unique Benes
ciprofloxacin-dexamethasone otic / otic steroids with anti-infectives	$220,980	$248,697	$364,158	1,677	1,662
coagulation factor ix / factor for bleeding disorders	$72,551	$75,217	$194,992	8	6
insulin glargine / insulin	$775,513	$834,898	$831,197	1,888	1,808
antihemophilic factor-von willebrand factor / factor for bleeding disorders	$88,086	$151,723	$143,669	13	9
interferon gamma-1b / interferons	$104,746	$157,129	$157,299	4	4
ivacaftor-tezacaftor / CFTR combinations	$67,325	$89,733	$112,097	5	4
lomitapide / miscellaneous antihyperlipidemic agents	$0	$39,692	$39,692	1	1
lenalidomide / other immunosuppressants	$77,183	$133,053	$115,112	9	9
hydrocortisone/neomycin/polymyxin b otic / otic steroids with anti-infectives	$45,179	$51,812	$82,124	1,265	1,251
dimethyl fumarate / selective immunosuppressants	$147,588	$169,501	$184,249	25	24
trametinib / multikinase inhibitors	$0	$16,938	$34,906	4	3
cysteamine / miscellaneous uncategorized agents	$94,317	$105,079	$127,126	2	2
etanercept / antirheumatics	$464,971	$458,230	$497,081	107	94
imatinib / BCR-ABL tyrosine kinase inhibitors	$108,927	$141,643	$138,096	18	17
olaparib / PARP inhibitors	$34,428	$34,428	$62,317	5	5
ethinyl estradiol-norelgestromin / contraceptives	$120,046	$137,331	$146,915	1,001	946
deflazacort / glucocorticoids	$11,662	$33,297	$36,933	6	5
asenapine / atypical antipsychotics	$200,113	$216,715	$224,681	266	241
enzalutamide / antineoplastic hormones	$93,327	$126,217	$115,242	11	11
bosentan / agents for pulmonary hypertension	$32,882	$43,760	$54,763	6	6
treprostinil / agents for pulmonary hypertension	$23,230	$34,061	$44,401	7	4
deutetrabenazine / VMAT2 inhibitors	$11,274	$29,533	$31,999	6	6
clobazam / benzodiazepine anticonvulsants	$383,347	$419,168	$403,086	222	210
erlotinib / EGFR inhibitors	$8,510	$17,839	$26,348	4	3
emtricitabine-tenofovir / antiviral combinations	$289,324	$320,125	$306,978	189	186

TABLE I: TOP 15 DRUG SOLID DOSAGE FORM HIGH VOLUME (100+ RX FILLS LAST MONTH) PRODUCTS WITH UNIT COST > $1
BY PERCENT CHANGE IN AMOUNT PAID PER UNIT APR 2018 TO JUN 2018 (FFS and CCOs)

Drug Product Therapeutic Category	Jun 2018 # Claims	Jun 2018 $ Paid	Jun 2018 Avr. Paid Per Rx	Jun 2018 Avr. Units Per Rx	Apr 2018 Paid Per Unit	May 2018 Paid Per Unit	Jun 2018 Paid Per Unit	Percent Change
Xulane (ethinyl estradiol-norelgestromin) 35 mcg-150 mcg/24 hr film, extended release / contraceptives (P)	1,001	$146,915	$146.77	3	$33.30	$40.19	$40.43	21.4%
carbamazepine 100 mg tablet, extended release / dibenzazepine anticonvulsants (P)	167	$19,534	$116.97	20	$80.09	$78.96	$96.36	20.3%
Tivicay (dolutegravir) 50 mg tablet / integrase strand transfer inhibitor (P)	170	$301,960	$1,776.24	33	$52.25	$52.46	$53.22	1.9%
Focalin XR (dexmethylphenidate) 25 mg capsule, extended release / CNS stimulants (P)	176	$67,374	$382.80	30	$12.13	$12.11	$12.31	1.5%
atomoxetine 25 mg capsule / CNS stimulants (P)	182	$18,424	$101.23	30	$2.90	$2.90	$2.94	1.4%
Vimpat (lacosamide) 200 mg tablet / miscellaneous anticonvulsants (P)	163	$127,543	$782.47	60	$12.74	$12.94	$12.90	1.2%
Saphris Black Cherry (asenapine) 10 mg tablet / atypical antipsychotics (P)	140	$124,228	$887.34	47	$18.82	$18.98	$19.02	1.0%
Tradjenta (linagliptin) 5 mg tablet / dipeptidyl peptidase 4 inhibitors (P)	287	$109,099	$380.13	29	$12.53	$12.68	$12.63	0.8%
Lyrica (pregabalin) 75 mg capsule / gamma-aminobutyric acid analogs (P)	377	$174,672	$463.32	64	$7.00	$7.05	$7.04	0.6%
Januvia (sitagliptin) 100 mg tablet / dipeptidyl peptidase 4 inhibitors (P)	420	$174,059	$414.43	30	$13.52	$13.58	$13.60	0.6%
Genvoya (cobicistat/elvitegravir/emtricitabine/tenofov) 150 mg-150 mg-200 mg-10 mg tablet / antiviral combinations (P)	203	$564,797	$2,782.25	30	$91.84	$93.13	$92.35	0.6%
Atripla (efavirenz/emtricitabine/tenofovir) 600 mg-200 mg-300 mg tablet / antiviral combinations (P)	110	$288,764	$2,625.13	30	$85.64	$85.13	$86.06	0.5%
Xarelto (rivaroxaban) 20 mg tablet / factor Xa inhibitors (P)	299	$120,891	$404.32	29	$13.23	$13.23	$13.29	0.5%

Products are only included if 100 or more fills in last month and average cost per unit in reference month was >= $1.

TABLE I: TOP 15 DRUG SOLID DOSAGE FORM HIGH VOLUME (100+ RX FILLS LAST MONTH) PRODUCTS WITH UNIT COST > $1
BY PERCENT CHANGE IN AMOUNT PAID PER UNIT APR 2018 TO JUN 2018 (FFS and CCOs)

Drug Product Therapeutic Category	Jun 2018 # Claims	Jun 2018 $ Paid	Jun 2018 Avr. Paid Per Rx	Jun 2018 Avr. Units Per Rx	Apr 2018 Paid Per Unit	May 2018 Paid Per Unit	Jun 2018 Paid Per Unit	Percent Change
Focalin XR (dexmethylphenidate) 10 mg capsule, extended release / CNS stimulants (P)	340	$121,340	$356.88	30	$11.58	$11.63	$11.63	0.5%
Taytulla (ethinyl estradiol-norethindrone) with iron 20 mcg-1 mg capsule / sex hormone combinations (P)	273	$48,587	$177.98	29	$5.80	$5.80	$5.82	0.4%

Products are only included if 100 or more fills in last month and average cost per unit in reference month was >= $1.

New Business

Special Analysis Projects

MISSISSIPPI DIVISION OF MEDICAID

MS-DUR INTERVENTION / EDUCATIONAL MAILING UPDATE

MAY 2018 – AUGUST 2018

Ongoing Mailings:

HIGH MEDD (≥90 MEDD) MAILING Initiated Sept 2016			CONCOMITANT BENZODIAZEPINE / OPIOID USE Initiated Feb 2017		PROVIDER SHOPPING FOR OPIOIDS (≥4 Prescribers AND ≥4 Pharmacies) Initiated Nov 2017		
Month	Prescribers Mailed	Benes Addressed	Prescribers Mailed	Benes Addressed	Prescribers Mailed	Pharms Mailed	Benes Addressed
17-Nov	51	61	150	532	64	49	112
17-Dec	-	-	150	485	56	44	105
18-Jan	46	50	150	380	54	32	95
18-Feb	54	71	150	485	54	42	107
18-Mar	46	49	150	368	51	39	100
18-Apr	53	68	150	412	54	44	105
18-May	*20	*21	150	*187	*48	*34	*85
18-Jun	*31	*40	150	*283	*31	*18	*53
18-Jul	48	56	150	323	33	26	65
18-Aug	35	53	150	405	48	34	83

* Data for CCOs was incomplete at the time the mailing was run

One-Time Mailings:

STIMULANT DIAGNOSIS EDIT LETTER	
	Prescribers Mailed
18-Aug	2,100

OPIOID PRESCRIBING TRENDS IN MISSISSIPPI MEDICAID

BACKGROUND

Over the past decade the opioid crisis has gripped the entire nation. As part of the effort to address this crisis impacting Mississippi Division of Medicaid (DOM) beneficiaries, the MS-DUR has reviewed a variety of opioid related reports with the Mississippi Drug Utilization Review (DUR) Board and the Board has made several recommendations for DUR activities to address the problem. This report was developed to provide a summary of DOM and MS-DUR activities related to the issues previously addressed by the board.

In 2015, the Pharmacy Quality Alliance (PQA) endorsed a set of measures to address use of opioids from multiple providers and/or at high dose among beneficiaries without cancer. Centers for Medicare and Medicaid Services (CMS) added the PQA high dose measure to the Medicaid Adult Core Quality Measure Set in 2016 and identified the multiple provider measures for possible inclusion in the Adult Core Set in the near future.

Multiple Providers and Multiple Pharmacies Measure: The percentage of individuals without cancer receiving prescriptions for opioids from four (4) or more prescribers AND four (4) or more pharmacies.

When this measure was being developed by PQA in 2014, MS-DUR ran an analysis to assess DOM performance on the measure. The results were presented to the DUR Board and a recommendation was made for MS-DUR to conduct an educational intervention addressing provider shopping. An initial educational intervention was conducted through monthly mailings from November 2014 through June 2015. With the increased emphasis on opioid interventions and the inclusion of part of the PQA measure in the CMS Medicaid Adult Core Set, MS-DUR initiated a new educational intervention in November 2017 to address quality improvement on this measure. This intervention is still ongoing. Table 1 summarizes the activities related to this educational intervention.

Table 1: Opioid Provider Shopping Educational Intervention Mailing Statistics

Month	Total Number of Beneficiaries With Opioid Prescriptions	Total Number of Opioid Claims	Total Prescribers Mailed	Number of Beneficiaries Identified in Prescriber Letters	Total Pharmacies Mailed	Number of Beneficiaries Identified in Pharmacy Letters	Total Provider Mailings
Nov-17	12,408	70,569	64	70	49	51	113
Dec-17	11,295	64,275	57	59	44	46	101
Jan-18	11,144	63,214	54	57	32	38	86
Feb-18	10,842	62,069	54	62	42	45	96
Mar-18	10,491	59,982	51	57	39	43	90
Apr-18	10,145	57,906	54	59	44	46	98
May-18	8,213	46,972	48	50	34	35	82
Jun-18	5,257	29,823	31	33	18	20	49
Jul-18	9,398	53,256	33	37	26	28	59

During the April 2016 DUR Board Meeting, MS-DUR reviewed the CDC Guidelines for Prescribing Opioids for Chronic Pain[1] and data regarding DOM's performance on each recommendation that could be addressed through DUR efforts. The following CDC recommendations were reviewed, analyses using claims data for calendar year 2015 were presented and several recommendations were made by the DUR Board.

CDC recommendation 1: When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.

MS-DUR identified new starts for narcotic therapy using a 60-day and 90-day wash out period.

- When using a 60-day period to define a new start, only 711 (0.70%) of beneficiaries had a new narcotic prescription fill that was NOT for a short-acting (SA) narcotic.
- This number decreased to 396 (0.46%) when using a 90-day period to define a new start.
- SA opioids were not always being used before patients were transitioned to LA opioids and 14-18% of beneficiaries taking LA opioids used them intermittently.

DUR Board Recommendation: New narcotic prescriptions (first narcotic fill within 90 days) for non-cancer patients must be for SA narcotics.

DOM is in the process of implementing electronic prior authorization edits addressing this recommendation.

CDC recommendation 2: When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should use caution when prescribing opioids at any dosage, should carefully reassess evidence of individual benefits and risks when increasing dosage to ≥50 morphine milligram equivalents (MME)/day, and should avoid increasing dosage to ≥90 MME/day or carefully justify a decision to titrate dosage to ≥90 MME/day.

MS-DUR reported that in 2015:

- 23% of beneficiaries taking opioids had individual prescriptions written for ≥50 MME and
- 4.6% had individual prescriptions written for ≥90 MME.

DUR Board Recommendation: For non-cancer patients, individual prescriptions for opioids with a MME of ≥ 90 must require a manual PA with documentation that the benefits outweigh the risks and that the patient has been counseled about the risks of overdose and death.

DOM is in the process of implementing electronic prior authorization edits addressing this recommendation. An educational mailing was initiated in September 2016 targeting providers who prescribe opioids at a dosage > 90 MME. Table 2 provides a summary of the educational activities related to this recommendation. This is an ongoing intervention.

[1] CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. http://www.cdc.gov/media/modules/dpk/2016/dpk-pod/rr6501e1er-ebook.pdf.

Table 2: High MEDD Educational Intervention Mailing Statistics					
Month	Total Prescriptions Analyzed for Mailing	Number of Prescriptions Exceeding Criteria	Number of Beneficiaries Exceeding Criteria	Number of Prescribers Mailed	Number of Beneficiaries Addressed in Letters
Sep-16	1,960	603	449	141	220
Oct-16	2,331	680	516	61	72
Nov-16	2,643	701	509	119	217
Dec-16	1,670	467	359	60	69
Jan-17	2,600	843	580	128	213
Feb-17	3,237	920	504	81	108
Mar-17	1,851	638	444	115	199
Apr-17	1,594	586	422	77	96
May-17	1,275	381	288	78	133
Jun-17	1,319	373	286	64	72
Jul-17	1,337	353	273	75	119
Aug-17	1,781	479	348	78	83
Sep-17	1,031	298	228	65	94
Oct-17	1,076	314	231	51	61
Nov-17	1,236	295	217	53	81
Jan-18	834	232	177	46	50
Feb-18	781	212	160	54	71
Mar-18	931	265	189	46	49
Apr-18	723	210	149	53	68
May-18	414	125	89	20*	21*
Jun-18	436	134	98	31*	40*
Jul-18	870	226	168	48	56

** Magnolia data incomplete at time of mailing*

CDC recommendation 4: Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three days or less will often be sufficient; more than seven days will rarely be needed.

The MS-DUR 2015 analysis found that:

- 72% of new starts for SA narcotic prescriptions were written for ≤ 7 days and
- 88% were written for ≤ 15 days.

DUR Board Recommendations: For non-cancer patients, new fills (first prescription fill in 90 days) for a SA opioid can be approved through an electronic PA for a maximum of two 7-day supplies. Use of SA opioids for longer periods will require a manual PA.

DOM is in the process of implementing electronic prior authorization edits addressing this recommendation.

CDC recommendation 5: Providers should avoid prescribing opioid pain medication for patients receiving benzodiazepines whenever possible.

The MS-DUR 2015 analysis found that:

- 5.3% of beneficiaries taking opioids were concomitantly taking benzodiazepines.

<u>DUR Board Recommendation</u>: Concomitant use of opioids and benzodiazepines should require a manual PA. MS-DUR should provide an educational mailing to providers prescribing concurrent use of benzodiazepines and opioids to inform them of the increased safety risks and highlight the CDC recommendation to avoid concomitant use.

DOM is in the process of implementing electronic prior authorization edits addressing this recommendation. An educational mailing was initiated in February 2017 targeting providers with beneficiaries concomitantly receiving a benzodiazepine and an opioid. The mailing is limited to 150 prescribers monthly and prescribers are prioritized each month based on the number of beneficiaries with exceptions.

Table 3: Concomitant Opioid/Benzodiazepine Educational Intervention Mailing Statistics

Month	Total Prescriptions Analyzed for Mailing	Number of Prescriptions Exceeding Criteria	Number of Beneficiaries Exceeding Criteria	Number of Prescribers Mailed	Number of Beneficiaries Addressed in Letters
Feb-17	36,864	5,882	2,600	150	727
Mar-17	37,277	6,442	3,059	150	539
Apr-17	37,971	6,841	3,232	150	637
May-17	28,291	4,134	1,965	150	334
Jun-17	37,076	6,937	3,295	150	664
Jul-17	35,407	5,875	2,790	150	447
Aug-17	38,309	6,873	3,250	150	635
Sep-17	33,738	5,427	2,604	150	409
Oct-17	33,887	5,056	2,396	150	532
Nov-17	34,483	5,496	2,601	150	451
Dec-17	27,975	3,961	1,903	150	485
Jan-18	29,864	4,336	2,070	150	380
Feb-18	28,391	3,893	1,854	150	485
Mar-18	30,200	4,218	2,009	150	368
Apr-18	26,660	3,469	1,645	150	412
May-18	15,051	1,477	701	150	187*
Jun-18	15,934	1,762	832	150	283*
Jul-18	27,676	3,234	1,532	150	323

** Magnolia data incomplete at time of mailing*

MS-DUR analyzed opioid claims for the period from January 2016 through June 2018 to examine prescribing trends related to several of the CDC recommendations and the MS-DUR educational intervention activities that are ongoing to address the DUR Board Recommendations.

RESULTS

Tables 4 and 5 provide data about the trends in opioid prescribing during the last two and a half years. The trends can be more clearly observed in Figures 1 through 7.

TABLE 4: Characteristics of Beneficiaries Filling Opioid Prescriptions

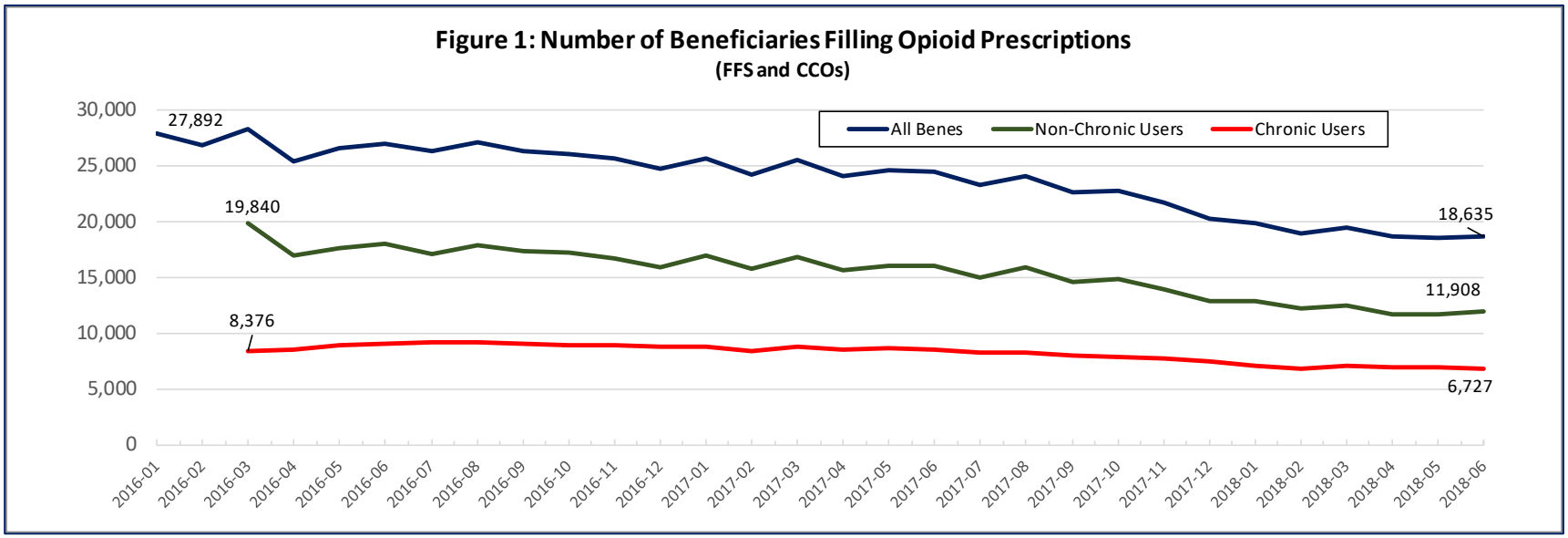
(Includes fee-for-service and coordinated care organizations)

Month Filled	Number Filling Opioid Prescriptions	Chronic Opioid User*	Non-Chronic Opioid Users*						Chronic Opioid Users*					
			Number of Benes	Days Supply Filled					Number of Benes	Days Supply Filled				
				1 to 3	4 to 7	8 to 15	16 to 29	30		1 to 3	4 to 7	8 to 15	16 to 29	30
2016-01	27,892													
2016-02	26,847													
2016-03	28,216	29.7%	19,840	26.5%	33.4%	22.3%	5.8%	11.8%	8,376	0.5%	0.9%	6.7%	17.0%	74.9%
2016-04	25,429	33.6%	16,890	27.3%	34.0%	22.7%	6.1%	9.8%	8,539	0.7%	1.5%	7.9%	16.7%	73.3%
2016-05	26,604	33.6%	17,658	27.2%	33.6%	22.6%	6.6%	9.9%	8,946	0.5%	1.1%	7.7%	15.5%	75.2%
2016-06	27,002	33.6%	17,926	27.7%	33.8%	23.1%	6.5%	8.9%	9,076	0.6%	1.1%	6.9%	16.5%	74.9%
2016-07	26,231	34.7%	17,124	28.0%	34.5%	23.5%	5.7%	8.4%	9,107	0.5%	1.2%	7.6%	17.3%	73.4%
2016-08	27,067	33.9%	17,889	27.4%	34.4%	23.8%	6.2%	8.1%	9,178	0.5%	1.1%	7.5%	17.1%	73.8%
2016-09	26,274	34.2%	17,290	27.4%	34.6%	23.3%	6.2%	8.5%	8,984	0.6%	1.1%	7.4%	17.2%	73.8%
2016-10	26,025	34.1%	17,159	27.3%	35.4%	23.0%	5.9%	8.4%	8,866	0.6%	0.9%	6.6%	18.0%	73.9%
2016-11	25,695	34.9%	16,737	27.7%	35.0%	22.5%	6.2%	8.7%	8,958	0.5%	1.0%	7.3%	17.4%	73.8%
2016-12	24,687	35.6%	15,900	27.4%	36.2%	21.6%	6.7%	8.1%	8,787	0.5%	0.8%	6.5%	17.7%	74.6%
2017-01	25,593	34.1%	16,871	28.2%	35.7%	21.2%	6.7%	8.2%	8,722	0.4%	0.9%	7.2%	18.6%	72.8%
2017-02	24,208	34.7%	15,805	28.5%	35.7%	21.2%	6.5%	8.1%	8,403	0.5%	1.0%	6.3%	19.2%	72.9%
2017-03	25,554	34.4%	16,769	29.0%	35.6%	21.8%	6.2%	7.3%	8,785	0.4%	0.6%	7.0%	19.1%	72.9%
2017-04	24,042	35.1%	15,604	29.5%	35.6%	21.3%	6.3%	7.2%	8,438	0.6%	0.9%	6.8%	20.0%	71.7%
2017-05	24,599	35.1%	15,977	28.2%	35.7%	22.0%	6.6%	7.6%	8,622	0.3%	0.9%	6.3%	20.0%	72.6%
2017-06	24,500	34.8%	15,969	29.4%	35.3%	21.5%	6.4%	7.4%	8,531	0.3%	1.1%	6.2%	20.4%	72.0%
2017-07	23,196	35.5%	14,971	29.3%	35.1%	21.7%	6.4%	7.5%	8,225	0.4%	1.0%	6.5%	20.7%	71.5%
2017-08	24,023	34.0%	15,849	30.5%	34.6%	20.7%	6.5%	7.7%	8,174	0.5%	1.0%	6.2%	20.6%	71.6%
2017-09	22,584	35.4%	14,593	30.0%	34.4%	21.3%	6.7%	7.6%	7,991	0.5%	0.7%	6.9%	20.4%	71.5%
2017-10	22,669	34.6%	14,825	30.8%	35.0%	19.6%	6.6%	8.0%	7,844	0.4%	1.2%	7.1%	20.9%	70.3%
2017-11	21,634	35.5%	13,951	30.5%	36.0%	20.6%	6.2%	6.7%	7,683	0.4%	1.5%	7.0%	20.9%	70.1%
2017-12	20,264	36.6%	12,850	29.7%	35.1%	20.8%	6.9%	7.4%	7,414	0.4%	1.0%	6.5%	20.2%	71.8%
2018-01	19,891	35.4%	12,843	30.5%	34.4%	20.8%	6.9%	7.4%	7,048	0.6%	0.9%	5.8%	21.2%	71.6%
2018-02	18,925	35.9%	12,125	32.3%	32.0%	20.5%	7.1%	8.2%	6,800	0.5%	0.7%	5.5%	20.7%	72.6%
2018-03	19,436	36.0%	12,441	33.7%	32.0%	20.2%	6.6%	7.5%	6,995	0.4%	0.7%	5.5%	20.4%	73.0%
2018-04	18,589	37.0%	11,718	34.0%	31.7%	20.5%	6.6%	7.2%	6,871	0.5%	0.9%	5.3%	21.3%	72.0%
2018-05	18,566	37.1%	11,683	34.1%	31.7%	19.7%	6.9%	7.6%	6,883	0.3%	0.8%	5.2%	21.0%	72.8%
2018-06	18,635	36.1%	11,908	34.2%	33.4%	19.2%	5.9%	7.2%	6,727	0.3%	0.5%	5.1%	21.3%	72.8%

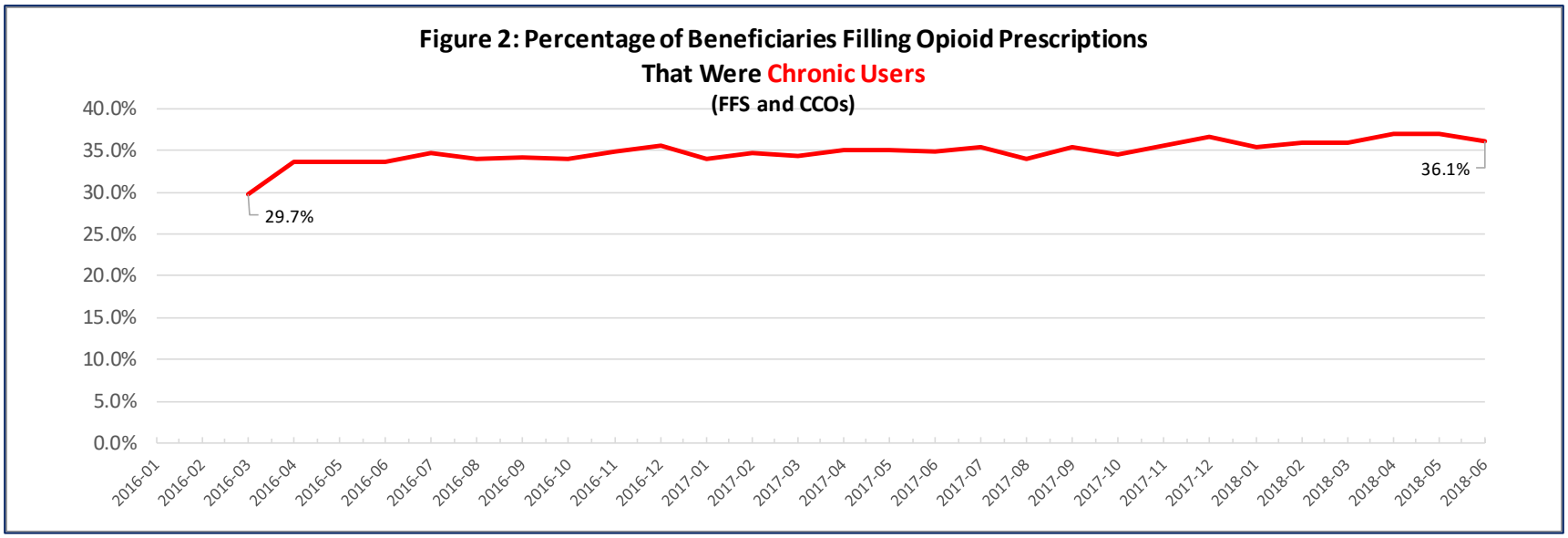
** Chronic user defined as beneficiary with 60+ days of opioids in last 90 days counting current fill during month.*

Figure 1 shows the number of beneficiaries filling opioid prescriptions each month and the number of beneficiaries that were chronic users and non-chronic users of opioids. Chronic users were defined as beneficiaries who had received 60 or more days of opioid therapy during the 90-day period prior to and through the end of the current prescription being filled.

- During the last 2.5 years, there has been a 33% decrease in the number of beneficiaries filling prescriptions for opioids each month.
- Most of the decrease has occurred among non-chronic opioid users (40% decrease for non-chronic compared to only 20% for chronic users).

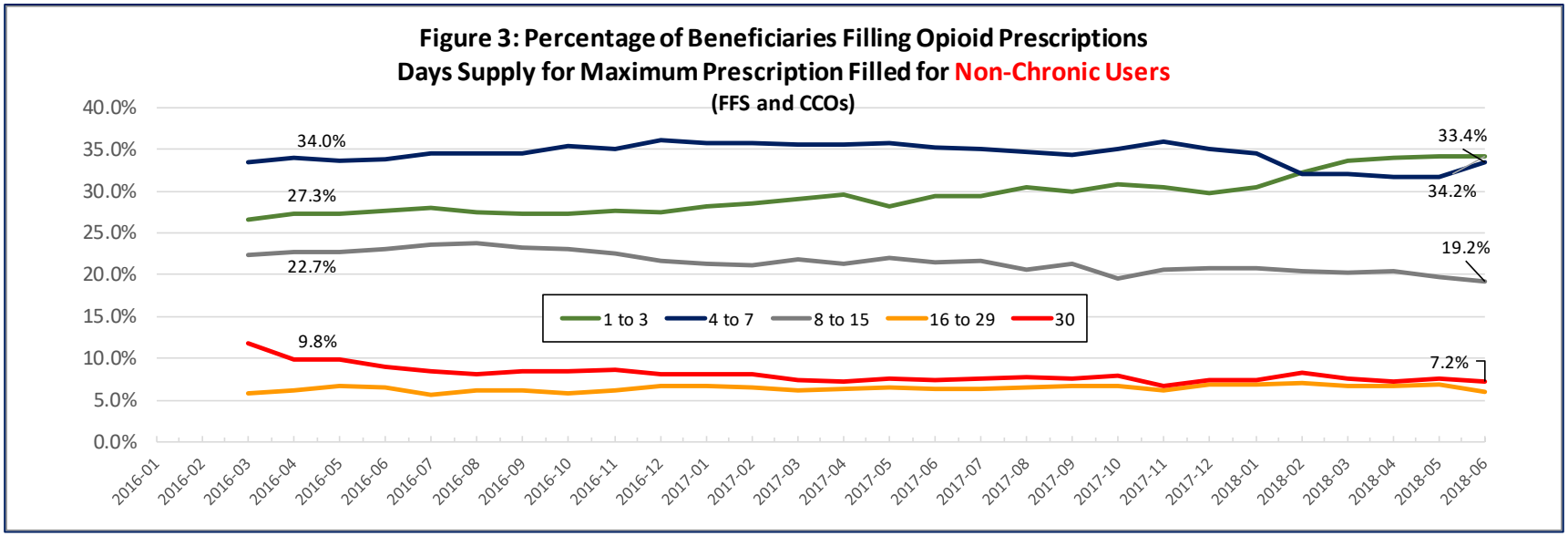


Due to the greater reduction in non-chronic users, the percentage of beneficiaries filling opioid prescriptions each month that are chronic users has increased from 30% to 36% (Figure 2).



The CDC guidelines included recommendations that when opioid therapy is initiated, the number of days prescribed should be as short as possible. DOM is in the process of implementing electronic prior authorization edits to encourage short initial trials when initiating treatment with opioids. As shown in Figures 3 and 4, the number of days supply associated with opioid prescription fills varies considerably between non-chronic users and chronic users but the patterns for each group have remained fairly consistent over the last 2.5 years. By definition, non-chronic users represent what could be considered new starts on opioid therapy.

- As shown in Figure 3, almost two-thirds of these prescriptions were filled for 7 days or less of therapy.
- Less than 10% of prescriptions for non-chronic patients were filled for a 30-day supply.



- **As shown in Figure 4, over 70% of prescriptions for chronic users were filled for 30-days supply.**

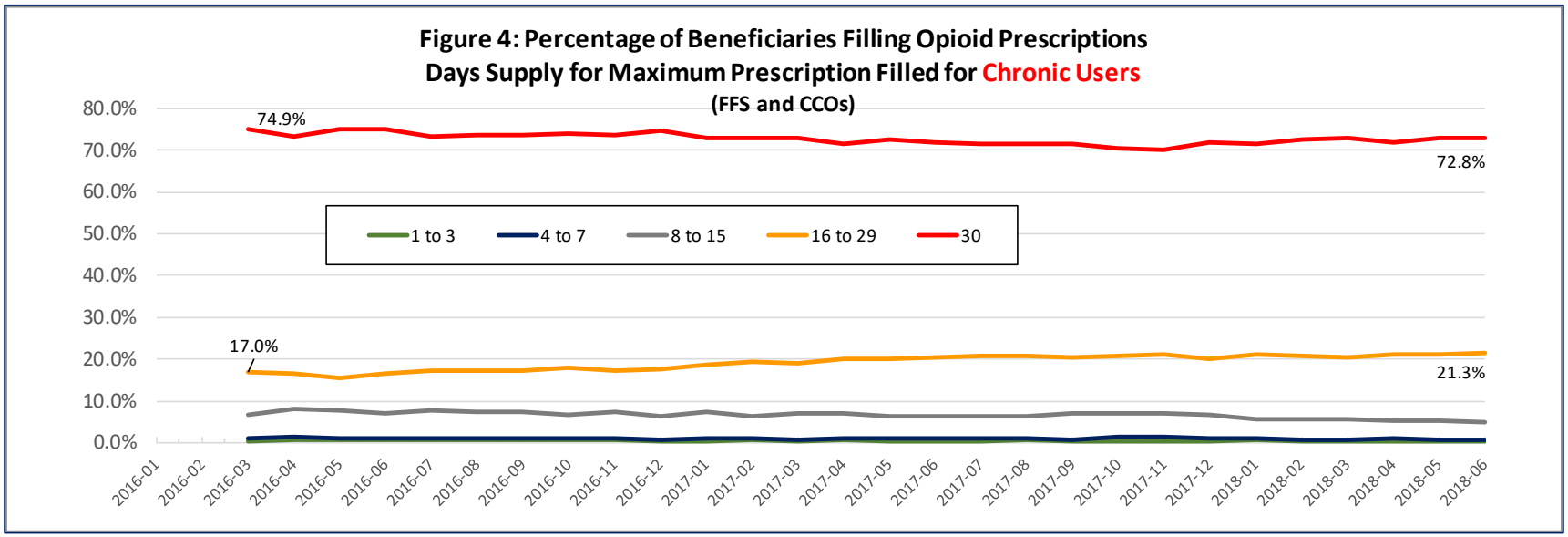


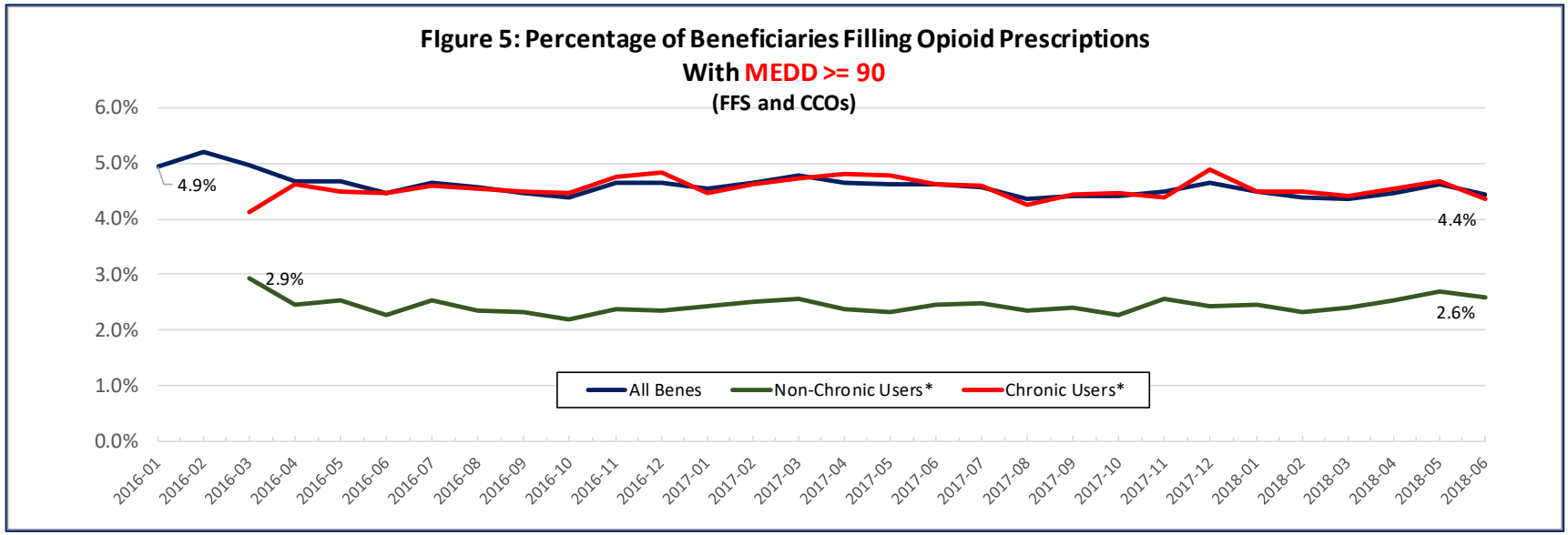
TABLE 5: Characteristics of Beneficiaries Filling Opioid Prescriptions

(Includes fee-for-service and coordinated care organizations)

Month Filled	Total Number of Benficiareis	MEDD ≥90			4+ Prescribers in Last 6 Months	4+ Pharmacies in Last 6 Months	4+ Prescribers AND 4+ Pharmacies in Last 6 Months	Concomitant Use With Benzodiazepine
		All Benes	Non-Chronic Users*	Chronic Users*				
2016-01	27,892	4.9%						15.7%
2016-02	26,847	5.2%						17.5%
2016-03	28,216	5.0%	2.9%	4.1%				17.0%
2016-04	25,429	4.7%	2.4%	4.6%				17.0%
2016-05	26,604	4.7%	2.5%	4.5%				17.5%
2016-06	27,002	4.5%	2.3%	4.5%	6.6%	2.1%	1.0%	17.6%
2016-07	26,231	4.7%	2.5%	4.6%	7.4%	2.3%	1.2%	17.1%
2016-08	27,067	4.6%	2.4%	4.6%	7.2%	2.0%	1.0%	17.2%
2016-09	26,274	4.5%	2.3%	4.5%	6.8%	1.9%	1.0%	17.0%
2016-10	26,025	4.4%	2.2%	4.5%	6.4%	1.8%	0.8%	16.8%
2016-11	25,695	4.7%	2.4%	4.7%	6.1%	1.6%	0.8%	16.7%
2016-12	24,687	4.6%	2.4%	4.8%	5.5%	1.4%	0.7%	16.8%
2017-01	25,593	4.5%	2.4%	4.5%	5.3%	1.4%	0.7%	16.2%
2017-02	24,208	4.7%	2.5%	4.6%	5.3%	1.3%	0.7%	16.7%
2017-03	25,554	4.8%	2.6%	4.7%	5.0%	1.5%	0.8%	16.3%
2017-04	24,042	4.7%	2.4%	4.8%	5.3%	1.4%	0.7%	16.1%
2017-05	24,599	4.6%	2.3%	4.8%	5.4%	1.5%	0.7%	16.1%
2017-06	24,500	4.6%	2.5%	4.6%	5.0%	1.4%	0.7%	15.7%
2017-07	23,196	4.6%	2.5%	4.6%	5.3%	1.4%	0.7%	15.6%
2017-08	24,023	4.4%	2.4%	4.3%	5.0%	1.5%	0.8%	14.7%
2017-09	22,584	4.4%	2.4%	4.4%	5.3%	1.6%	0.8%	14.6%
2017-10	22,669	4.4%	2.3%	4.5%	5.5%	1.6%	0.8%	13.9%
2017-11	21,634	4.5%	2.6%	4.4%	5.2%	1.4%	0.6%	13.4%
2017-12	20,264	4.6%	2.4%	4.9%	5.1%	1.5%	0.7%	13.3%
2018-01	19,891	4.5%	2.4%	4.5%	5.4%	1.5%	0.8%	12.6%
2018-02	18,925	4.4%	2.3%	4.5%	5.2%	1.5%	0.7%	13.1%
2018-03	19,436	4.4%	2.4%	4.4%	4.9%	1.5%	0.7%	11.9%
2018-04	18,589	4.5%	2.5%	4.5%	4.6%	1.4%	0.6%	11.7%
2018-05	18,566	4.6%	2.7%	4.7%	4.8%	1.5%	0.7%	11.4%
2018-06	18,635	4.4%	2.6%	4.4%	4.5%	1.4%	0.6%	10.7%

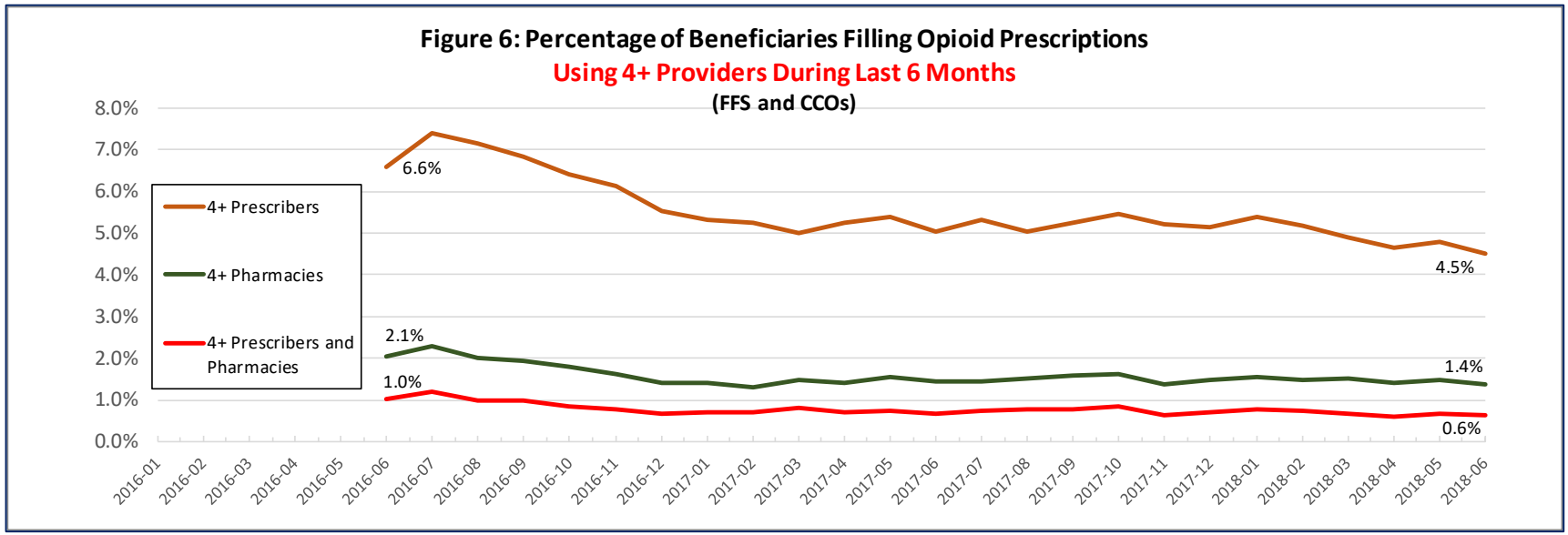
** Chronic user defined as beneficiary with 60+ days of opioids in last 90 days counting current fill during month.*

Figure 5 shows the trend in the percentage of beneficiaries filling opioid prescriptions with a morphine equivalent daily dose (MEDD) ≥ 90. Although an educational intervention has been ongoing since September 2016, there has been little, if any change in this behavior. It is important to note, however, that the overall performance on this measure is heavily driven by beneficiaries who are chronic users of opioids. These beneficiaries typically receive 30-days supply.

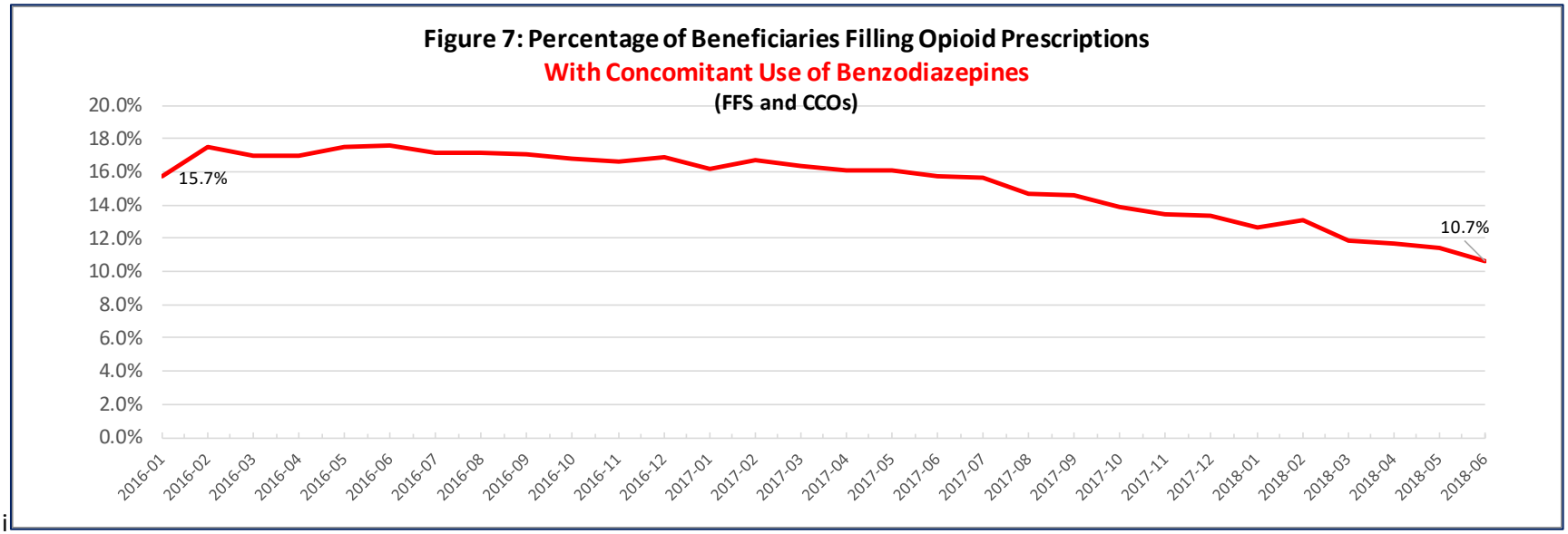


Provider shopping for opioids is one of the best predictors of potential overdose and/or death from opioids. As such, this measure is being considered by CMS for inclusion in the Medicaid Adult Core Set of quality measures. As previously mentioned, an educational intervention was conducted November 2014 through June 2015 and a new intervention has been underway since November 2017. Figure 6 illustrates that there has been:

- a significant decrease in the number of opioid prescriptions filled each month that are associated with prescriber shopping (use of 4+ prescribers during last 6 months);
- a moderate decrease in pharmacy shopping (use of 4+ pharmacies during last 6 months) and
- a slight decrease in the overall measure of provider shopping (use of both 4+ prescribers and pharmacies during last 6 months).



The CDC made a strong recommendation that opioids and benzodiazepines not be taken concomitantly. Analysis reported to the DUR Board from 2015 showed that chronic concomitant use of these products was fairly common in the Medicaid population. Figure 7 shows the percentage of opioid prescriptions filled each month that were associated with concomitant use of a benzodiazepine. Since the educational intervention began in February 2017, there has been a steady decrease in this prescribing behavior.



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CONCLUSIONS

As previously discussed with the DUR Board, addressing the opioid epidemic involves two basic strategies:

1. Changing prescribing behaviors to reduce the likelihood of creating additional beneficiaries who are dependent or addicted to opioids and;
2. Treating beneficiaries who are already dependent or addicted by tapering them to lower doses and when possible providing medication assisted therapy (MAT) and psychosocial counseling to treat and manage their addiction.

The prescribing trends reviewed today indicate that some progress is being made toward the first strategy. In the upcoming months, DOM will be implementing electronic prior authorization edits to more directly address:

- high MEDD prescribing, starting treatment with short-acting opioids,
- limiting the number of days prescribed when initiating therapy, and
- concomitant use of opioids and benzodiazepines.

Additionally, MS-DUR will continue the currently ongoing educational interventions. DOM has recently added additional MAT options (Sublocade/Probuphine/Vivitrol) to the Clinician Administered Drug and Device list as well as the Preferred Drug List (PDL), thus increasing access to these MAT options. Other opiate dependence treatment options are also available on the PDL.

Board Action Requested:

This report was prepared to provide an update to the DUR Board. Feedback from the Board is appreciated but no specific recommendations are being proposed for the Board at this time.

UPDATE ON THE USE OF CODEINE AND TRAMADOL IN MISSISSIPPI MEDICAID

BACKGROUND

In April 2017, the US Food and Drug Administration (FDA) issued a notice restricting the use of codeine and tramadol medications in children. The new FDA drug safety announcement stated they were adding the following to the labeling of these products:[1]

- FDA's strongest warning, called a *Contraindication*, to the drug labels of codeine and tramadol alerting that codeine should not be used to treat pain or cough and tramadol should not be used to treat pain in children younger than 12 years.
- A new *Contraindication* to the tramadol label warning against its use in children younger than 18 years to treat pain after surgery to remove the tonsils and/or adenoids.
- A new *Warning* to the drug labels of codeine and tramadol to recommend against their use in adolescents between 12 and 18 years who are obese or have conditions such as obstructive sleep apnea or severe lung disease, which may increase the risk of serious breathing problems.
- A strengthened *Warning* to mothers that breastfeeding is not recommended when taking codeine or tramadol medicines due to the risk of serious adverse reactions in breastfed infants. These can include excess sleepiness, difficulty breastfeeding, or serious breathing problems that could result in death.

Prior to the publication of this notice by the FDA, the Mississippi Division of Medicaid (DOM) Universal Preferred Drug List (UPDL) did not include any minimum age restrictions on the use of codeine and tramadol medications.

At the November 2017 DUR Board meeting an analysis of prescription claims for codeine and tramadol products during calendar year 2016 was presented (Table 1). Members recommended implementation of prior authorization (PA) criteria for beneficiaries < 18 years of age prescribed codeine and tramadol products. Educational letters informing providers of this safety edit were distributed in January 2018 to any provider who was identified as prescribing codeine or tramadol products to beneficiaries < 18 years of age within six months of the mailing. A total of 1,067 letters were distributed. The electronic prior authorization safety edit was implemented in the pharmacy point of sale system (POS) in February 2018.

This report provides an update on tramadol and codeine prescribing in this population.

[1] U.S. Food and Drug Administration. FDA MedWatch Codeine and Tramadol Medicines: Drug Safety Communication Restricting Use in Children, Recommending Against Use in Breastfeeding Women. April 20, 2017. https://www.fda.gov/Drugs/DrugSafety/ucm549679.htm (Accessed August 2018).

METHODS

A retrospective analysis was conducted using Mississippi Medicaid pharmacy and medical claims from all pharmacy programs for the period from January 2016 to June 2018. A yearly comparison in prescribing of codeine and tramadol products was done for the periods April through June of 2016, 2017, and 2018 in order to provide comparable data for each year.

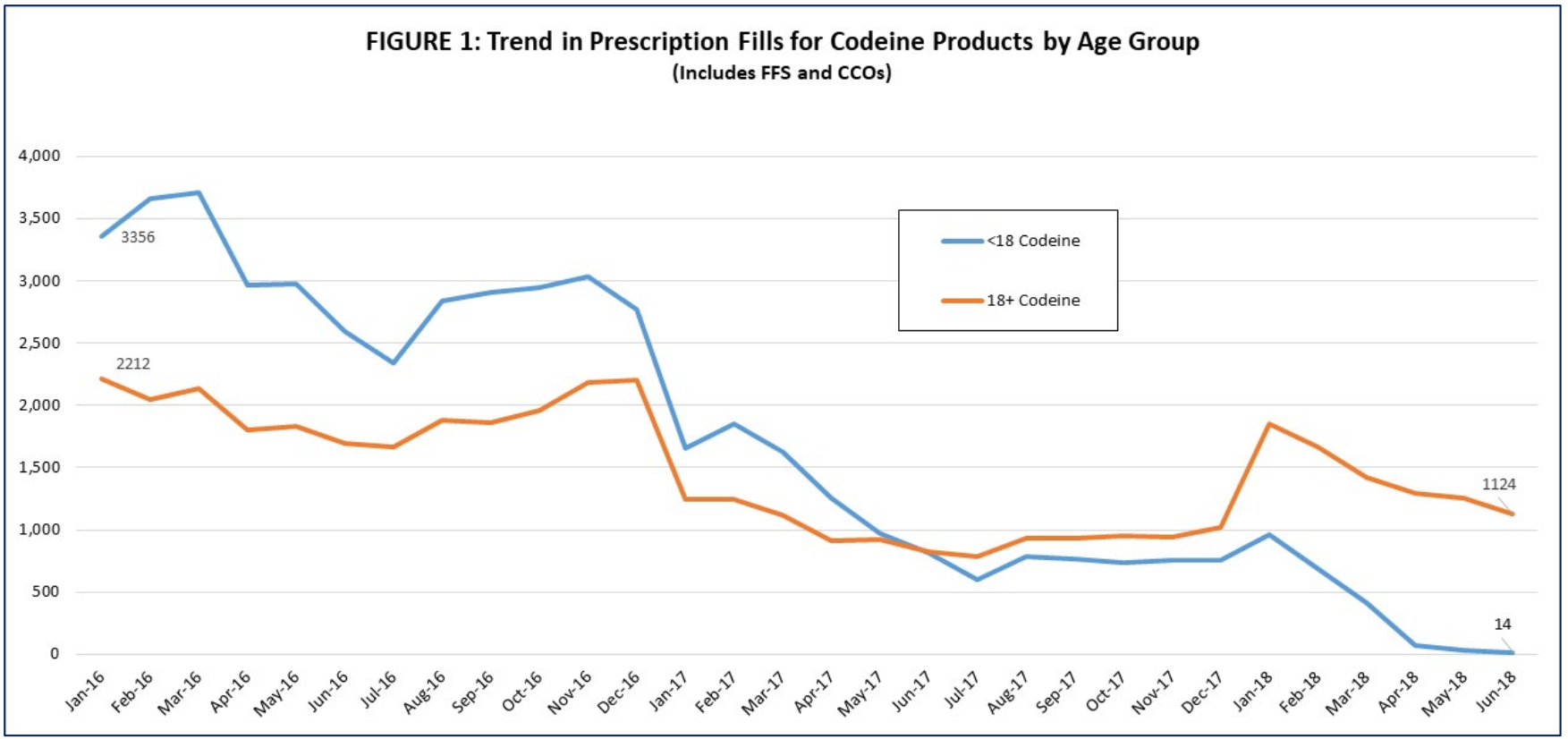
RESULTS

Table 1 shows the results from the annual comparison in prescribing of codeine and tramadol products during April through June timeframe for each year. Prescribing for beneficiaries under age 18 began decreasing after the FDA safety notice. After the electronic prior authorization was implemented in February 2018, prescribing of these products in this age group decreased to almost zero prescriptions.

TABLE 1: Beneficiaries Filling Codeine and Tramadol Prescriptions
(Includes FFS and CCOs)

Age at Time of Prescription	April - June 2016				
	Enrolled	Codeine		Tramadol	
0 to 5	153,498	1,260	0.8%	0	0.0%
6 to 11	147,016	1,757	1.2%	2	0.0%
12 to 17	121,692	994	0.8%	103	0.1%
18 to 44	166,047	1685	1.0%	868	0.5%
45+	190,685	520	0.3%	555	0.3%
Total	778,938	6216	0.8%	1528	0.2%
Age at Time of Prescription	**April - June 2017**				
	Enrolled	Codeine		Tramadol	
0 to 5	149,235	797	0.5%	1	0.0%
6 to 11	142,321	1,299	0.9%	5	0.0%
12 to 17	119,979	799	0.7%	108	0.1%
18 to 44	163,051	1632	1.0%	836	0.5%
45+	191,542	576	0.3%	727	0.4%
Total	766,128	5103	0.7%	1677	0.2%
Age at Time of Prescription	**April - June 2018**				
	Enrolled	Codeine		Tramadol	
0 to 5	142,307	6	0.0%	0	0.0%
6 to 11	134,682	19	0.0%	0	0.0%
12 to 17	116,624	31	0.0%	0	0.0%
18 to 44	154,227	1105	0.7%	602	0.4%
45+	189,713	434	0.2%	486	0.3%
Total	737,553	1595	0.2%	1088	0.1%

Figures 1 and 2 depict the number of monthly codeine and tramadol prescription claims by age group. These graphs clearly show the decline that began after the FDA safety notice and the rapid drop after the educational mailing and POS edit in 2018.



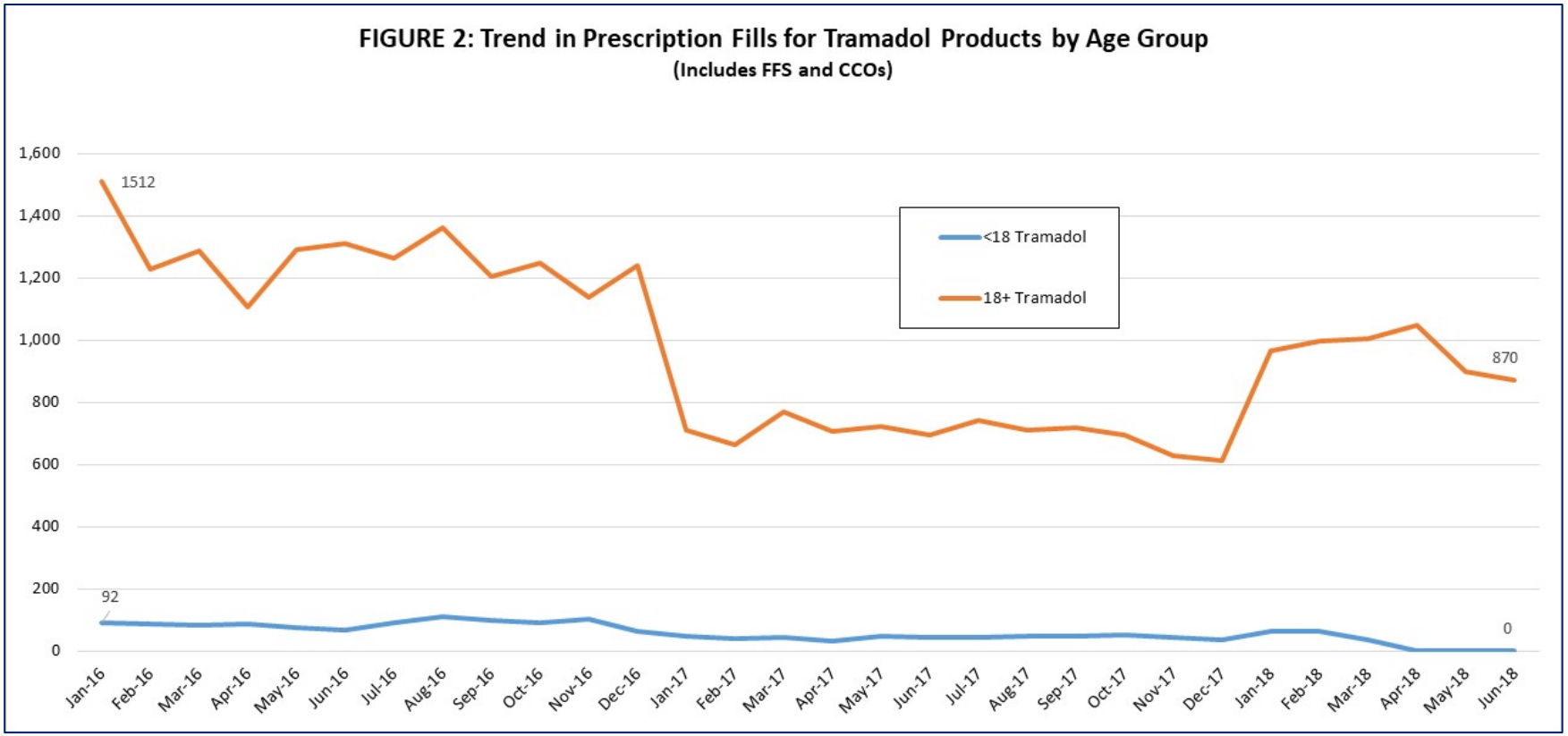


FIGURE 2: Trend in Prescription Fills for Tramadol Products by Age Group
(Includes FFS and CCOs)
1,600
1,400
1,200
1,000
800
600
400
200
0
1512
92
870
0
<18 Tramadol
18+ Tramadol
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18

CONCLUSIONS

Implementation of a POS SMART PA clinical edit has basically eliminated prescribing of codeine and tramadol products for beneficiaries less than age 18 years.

MIGRAINES AND THE INTRODUCTION OF CALCITONIN GENE-RELATED PEPTIDE (CGRP) INHIBITORS

BACKGROUND

Migraines impact a significant number of individuals in our nation today with an estimated 39 million people suffering from migraines annually. Of the American population, approximately 18% of women, 6% of men, and 10% of children suffer from migraines. Among those individuals diagnosed with migraines, about 7.8% meet criteria for chronic migraine diagnosis. Prevalence is highest in both men and women between ages 18 and 44 years. Nearly 1 in 4 households has at least 1 migraine sufferer. [1,2,3,4]

Although the exact mechanisms of migraines are not completely understood, they are believed to be the result of a complex series of neural and vascular events originating within the trigeminovascular system. Activation of trigeminal sensory nerves triggers the release of vasoactive neuropeptides (calcitonin gene-related peptide [CGRP], neurokinin A, and substance P) from perivascular axons. These released neuropeptides interact with dural blood vessels to promote vasodilation and dural plasma extravasation, resulting in neurogenic inflammation which produces pain.[5,6]

Migraines are characterized by recurring episodes of throbbing head pain that frequently presents unilaterally, but can present bilaterally. By definition, migraines last 4-72 hours and are moderate to severe in pain intensity. They are aggravated by or cause avoidance of routine physical activity, such as walking or climbing stairs. Migraines are associated with nausea and/or vomiting (N/V), sensitivity to light or sounds, and can be with or without aura.[4,7] Migraines are classified as either episodic or chronic. Episodic migraine (EM) is characterized by 14 or less headache days a month within a 3-month period. Chronic migraine (CM) is classified by 15 or more headache days per month for at least 3 months, of which 8 or more days meet the criteria for migraine.[8] It is important to note that chronic migraine diagnosis does not include medication overuse headache.

Pharmacologic therapies for migraine can be broadly divided into either acute or prophylactic therapy. Typically, acute therapy can consist of a variety of different medication classes such as simple analgesics

[1] Migraine Research Foundation. 2018. Available from: http://migraineresearchfoundation.org/about-migraine/migraine-facts/. (Accessed August 2018).

[2] Smitherman, TA, et al. The Prevalence, Impact, and Treatment of Migraine and Severe Headaches in the United States: A Review of Statistics from National Surveillance Studies. Headache. 2013 Mar;53(3):427-36. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/head.12074

[3] Buse DC, Manack AN, Fanning KM, et al. Chronic migraine prevalence, disability, and sociodemographic factors: results from the American Migraine Prevalence and Prevention Study. Headache 2012;52(10):1456-70.

[4] Burch, RC, et al. The Prevalence and Burden of Migraine and Severe Headache in the United States: Updated Statistics From Government Health Surveillance Studies. Headache. 2015 Jan;55(1):21-34. Available from: https://onlinelibrary.wiley.com/doi/pdf/10.1111/head.12482

[5] Minor, D, et al. Pharmacotherapy: A Pathophysiologic Approach [Internet]. 10th ed. New York (NY): McGraw-Hill; c2017. Chapter 61: Headache Disorders.

[6] Bigal, ME, et al. Migraine in the Triptan Era: Lessons from Epidemiology, Pathophysiology, and Clinical Science. Headache. 2009 Feb;49 Suppl 1:S21-33.

[7] Headache Classification Committee of International Headache Society. The International Classification of Headache Disorders, 3rd Edition. Available from: https://www.ichd-3.org/.

[8] Katsarava, Z, et al. Defining the Differences Between Episodic Migraine and Chronic Migraine. Curr Pain Headache Rep. 2012 Feb;16(1):86-92.

(NSAIDs, acetaminophen) or combination analgesic products for mild to moderate attacks. For moderate to severe migraine attacks not associated with vomiting or severe nausea, oral migraine-specific agents are first-line, including oral triptans and the combination of sumatriptan-naproxen. When nausea and/or vomiting accompany the migraine attack, non-oral migraine-specific medications including subcutaneous sumatriptan, nasal sumatriptan and nasal zolmitriptan are used. Antiemetics may also be given to help with N/V. Opioids and barbiturates have been used as treatment and should be reserved as a last resort. There is no high-quality evidence supporting the efficacy of barbiturates for acute migraine treatment. Opioids are generally not as effective as migraine-specific medications for acute migraine treatment. Use of opioids and butalbital is associated with increased risk of for the development of chronic migraine and even medication overuse headache.[9] Prophylactic therapy to decrease the frequency or severity of migraines consists primarily of some beta-blockers, antidepressants, and anticonvulsants, although other classes may also be used.[10] Patients on preventive therapy frequently discontinue or switch treatments due to lack of efficacy or tolerability.[11] Because of a delayed response in many of these therapies, adequate therapeutic trial of preventive therapies may require two to six months of treatment. Without adequate treatment, patients with episodic migraine are more likely to progress to chronic migraine. OnabotulinumtoxinA was the first US Food and Drug Administration (FDA) approved product for chronic migraine prophylaxis.[12]

In May 2018, erenumab (Aimovig™), a fully human monoclonal antibody that binds to the CGRP receptor, was approved by the FDA as a preventive therapy in both episodic and chronic migraine patients.[13] Aimovig is a once monthly, subcutaneous injection that costs up to $6900 (wholesale acquisition costs or WAC pricing) annually.[14] Aimovig's mechanism of action antagonizes CGRP receptor function. The CGRP pathway is important in pain modulation, and CGRP has been observed to increase during a migraine by binding to the CGRP receptor. (FIGURE 1)

[9] ICER report: Pharmacologic Treatment for Episodic Migraine Prevention in Adults (2012)16,113

[10] https://www.uptodate.com/contents/acute-treatment-of-migraine-in-adults

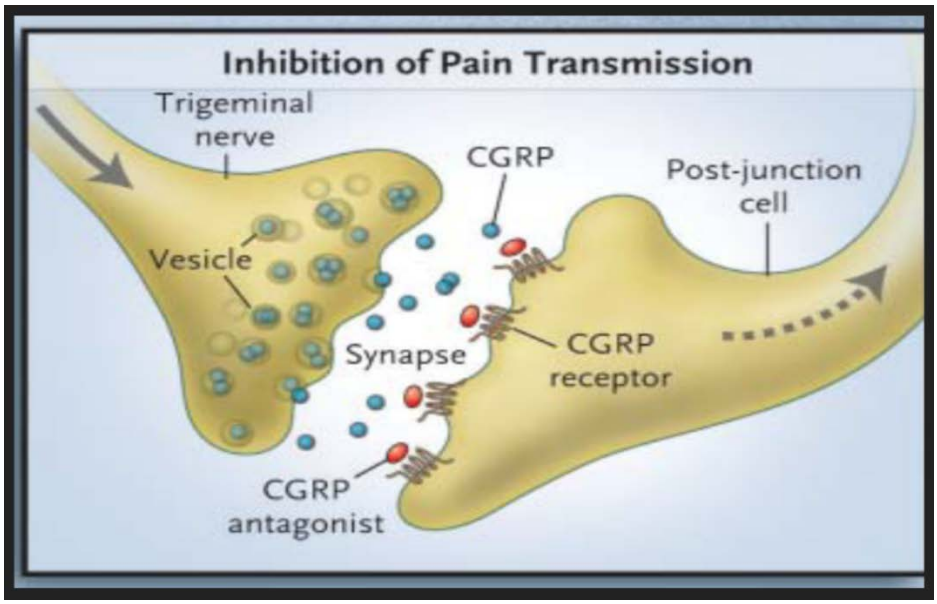
[11] Ford JH, Jackson J, Milligan G, Cotton S, Ahl J, Aurora SK. A Real-World Analysis of Migraine: A Cross-Sectional Study of Disease Burden and Treatment Patterns. Headache. 2017;57(10):1532-1544.

[12] Burch, RC, et al. The Prevalence and Burden of Migraine and Severe Headache in the United States: Updated Statistics From Government Health Surveillance Studies. Headache. 2015 Jan;55(1):21-34. Available from: https://onlinelibrary.wiley.com/doi/pdf/10.1111/head.12482

[13] FDA. FDA approves novel preventive treatment for migraine. May 2018. https://www.fda.gov/newsevents/newsroom/pressannouncements/ucm608120.htm. (Accessed August 2018).

[14] Rosenburg, J. FDA Approves Erenumab, First CGRP Inhibitor for Prevention of Migraine. American Journal of Managed Care. 2018 May 18.

FIGURE 1[15]



The effectiveness of Aimovig for the prevention of migraine was evaluated in three clinical trials. Two of the trials included participants with a history of episodic migraine and compared Aimovig to placebo. The third trial included participants with a history of chronic migraine and also compared Aimovig to placebo. In all three studies, Aimovig-treated patients experienced fewer migraine days monthly compared to placebo.[16]

Over the next few years, there is potential for multiple CGRP inhibitors to gain FDA approval and transform the migraine treatment landscape. This new drug class could have major implications on choice of therapy for migraine prophylaxis. In an attempt to gauge the potential impact this new class of medications may have in Mississippi Medicaid, MS-DUR examined the prevalence of Medicaid beneficiaries with a diagnosis of migraine and current treatment patterns for these beneficiaries.

METHODS

A retrospective analysis was conducted using Mississippi Medicaid pharmacy and medical claims from all pharmacy programs for the period from January 2017 to May 2018. Beneficiaries were identified as having migraine headaches if they had two or more medical claims with any ICD-10 code G43.X at least 31 days apart and occurring within one-year. Beneficiaries were classified as having chronic migraines if they had two or more medical claims at least 31 days apart and occurring within one-year that included ICD-10 code G43.7. All prescription claims were extracted for beneficiaries identified as having migraine headaches if the drugs were in a drug class with one or more products having an FDA or compendia supported indication for acute or prophylactic treatment of migraine or headaches. Drugs identified as having FDA medically-approved indications or being identified in any treatment guidelines for migraine are listed in Table 1.

[15]Image Source: http://pharmacologycorner.com/pharmacologic-treatment-migraine -pathophysiology-clinical-features/
[16] Aimovig®{package insert}. California: Amgen, Inc. 2018 (Accessed August 2018).

TABLE 1: Drug Products Identified as Commonly Used For Treatment of Migraine					
	Generic (Brand) Products	**FDA Indications***	**Compendia Supported Indications***	**Strength of Recommendation**	**Efficacy**
Prophylactic Treatment	Divalproex sodium (Depakote)	Migraine Prophylaxis (ppx)		IIb	IIa
	Carvedilol (Coreg)	*not indicated			
	Propranolol (Inderal)	Migraine ppx		IIa	I
	Gabapentin (Neurontin)	*not indicated			
	Pregabalin (Lyrica)	*not indicated			
	Topiramate (Topamax)	Migraine ppx		IIa	I
	Zonisamide (Zonegran)		Refractory Migraine ppx	IIb	IIa
	Amitriptyline (Elavil)		HA Treatment/ppx	IIb	IIa
	Doxepin (Sinequan)	*not indicated			
	Nortriptyline (Allegron)	*not indicated			
	Botox (onabotulinumtoxinA)	Chronic Migraine ppx, HA		IIb	IIa
	Venlafaxine (Effexor)		Tension-Type HA ppx	IIb	IIa
	Timolol (Blocadren)	Migraine ppx		IIa	I
	Metoprolol (Lopressor)		Migraine ppx	IIa	IIa
	Valproic acid (Depakene)	Migraine ppx		IIb	IIa
	Verapamil (Calan)		Migraine ppx	IIb	IIa
	Lisinopril (Zestril)		Migraine ppx	IIb	IIa
Acute Treatment	Sumatriptan (Imitrex)	Acute Migraine		IIa	I
	Eletriptan (Relpax)	Acute Migraine		IIa	I
	Rizatriptan (Maxalt)	Acute Migraine		IIa	I
	Naratriptan (Amerge)	Acute Migraine		IIa	I
	Almotriptan (Axert)	Acute Migraine		IIa	I
	Frovatriptan (Frova)	Acute Migraine		IIa	I
	Zolmitriptan (Zomig)	Acute Migraine		IIa	I
	Diclofenac (Voltaren)		Migraine	IIa	IIa
	Ibuprofen (Motrin)	Migraine		I	I
	Indomethacin (Indocin)	Headache		IIa	IIa
	Ketorolac (Toradol)	Headache		IIa	IIb
	Meloxicam (Mobic)	*not indicated			
	Naproxen (Aleve)	Headache		IIa	I
	Acetaminophen-Codeine (Tylenol #3)	*not indicated			
	Acetaminophen-Hydrocodone (Norco)	*not indicated			
	Acetaminophen-Oxycodone (Percocet)	*not indicated			
	Acetaminophen-Tramadol (Ultracet)	*not indicated			
	Morphine-Naltrexone (Embeda)	*not indicated			
	Oxycodone (Oxycontin)	*not indicated			
	Tramadol (Ultram)	*not indicated			
	Butabital-Aspirin-Caffeine (Fiorinal)	Tension-Type HA		IIb	IIa
	Butabital-Acetaminophen-Caffeine (Fioricet)	Tension-Type/ Muscular HA		IIb	IIa

** Micromedex Solutions (Internet). Truven Health Analytics. Greenwood Village, CO. Accessed 2018 August 8. Available from: www.micromedexsolutions.com*

***Micromedex "Strength of Recommendation" rating of at least IIB and "Efficacy" rating of at least IIA are considered a "medically-accepted indication."*

RESULTS

Table 2 shows the demographic and treatment characteristics for beneficiaries with episodic and chronic migraine diagnoses.

- Overall, 87.9% were diagnosed with only episodic migraine and 12.1% were diagnosed with chronic migraine. These percentages are fairly consistent with the known epidemiology of migraines.
- The majority of migraine patients were female (81.9%) and 21 years of age or older.
- As would be expected, treatment for episodic and chronic migraine patients differed.
- Although chronic migraine patients were more likely than episodic migraine patients to have received prophylactic treatment (88% CM versus 78% EM), the majority of both types of patients received prophylactic treatment.
- Chronic migraine patients were also more likely to have had an office visit with a neurologist (63% CM versus 26% EM) and to have had a prescription written by a neurologist (51% CM versus 24% EM).
- Although chronic migraine patients were more likely to see a neurologist, over a third had not done so during the last 17 months.

TABLE 2: Characteristics of Beneficiaries With Migraine With Medical Claims for Migraine Between January 2017 to May 2018

Demographic Characteristic		Type of Migraine Diagnoses									
		Episodic Migraine Diagnosis Only					Chronic Migraine Diagnosis Present				Total
		FFS	UHC	MAG	Total		FFS	UHC	MAG	Total	
Age Group	Less than 15 years	80	434	416	930	17.3%	4	15	13	32	4.3%	962 15.7%
	16-20 years	81	347	282	710	13.2%	6	33	20	59	7.9%	769 12.6%
	21-34 years	173	478	545	1,196	22.2%	23	80	93	196	26.4%	1,392 22.7%
	Greater than 35 years	804	742	998	2,544	47.3%	86	184	185	455	61.2%	2,999 49.0%
Gender	Female	858	1,621	1,870	4,349	80.8%	102	277	284	663	89.2%	5,012 81.9%
	Male	280	380	371	1,031	19.2%	17	35	27	79	10.6%	1,110 18.1%
Treatment Type	None	555	130	101	786	14.6%	20	8	1	29	3.9%	815 13.3%
	Acute only	81	151	172	404	7.5%	15	28	17	60	8.1%	464 7.6%
	Prophylactic only	131	420	416	967	18.0%	16	30	21	67	9.0%	1,034 16.9%
	Acute & prophylactic	371	1,300	1,552	3,223	59.9%	69	246	272	587	79.0%	3,810 62.2%
Rx from neurologist		151	533	620	1,304	24.2%	37	176	165	378	50.9%	1,682 27.5%
Office visit with neurologist		187	573	651	1,411	26.2%	63	212	197	472	63.5%	1,883 30.8%
Total Unique Beneficiaries		5,380 87.9%					743 12.1%					6,122

Table 3 reports information about the use of prophylactic agents by beneficiaries with migraine diagnoses.

- Overall, the most frequently used agents were topiramate, gabapentin and amitriptyline.
- For all of the prophylactic treatment agents, percentage of beneficiaries discontinuing therapy varied considerably by product.
- 23% of beneficiaries discontinued therapy before 60 days and 32% discontinued therapy before 90 days.

TABLE 3: Prophylactic Treatments Used by Beneficiaries With Migraine Diagnoses
(January 1, 2017 - May 31, 2018 -- Includes FFS and CCOs)

Treatment Type	Drug Product	Total Number of RXs	Number of Unique Beneficiaries With 1+ Prescriptions					Number of Unique Beneficiaries With ≥60 Days of Therapy			Number of Unique Beneficiaries With ≥90 Days of Therapy			Percentage of Beneficiaries Stopping Therapy	
			Total	Episodic Only N = 5,380		Chronic N = 743		Total	Episodic Only	Chronic	Total	Episodic Only	Chronic	Before 60 days	Before 90 Days
Prophylactic	**TOTAL WITH PROPHYLACTIC TREATMENT**	**39,737**	**4,274**	**3,627**	**67.4%**	**647**	**87.1%**	**3,290**	**2,912**	**378**	**2,982**	**2,469**	**513**	**23.0%**	**31.9%**
	topiramate*	9,380	1,952	1,782	33.1%	279	37.6%	1,413	1,201	212	1,086	926	160	27.6%	38.5%
	gabapentin	8,368	1,374	1,208	22.5%	244	32.8%	1,040	844	196	876	704	172	24.3%	38.6%
	amitriptyline*	4,968	1,183	1,053	19.6%	202	27.2%	799	656	143	593	486	107	32.5%	44.5%
	propranolol*	2,455	600	525	9.8%	111	14.9%	380	304	76	288	231	57	36.7%	49.3%
	metoprolol*	2,097	400	357	6.6%	73	9.8%	311	253	58	278	222	56	22.3%	36.8%
	pregabalin	2,337	397	345	6.4%	75	10.1%	292	234	58	255	205	50	26.4%	41.1%
	lisinopril*	1,462	368	324	6.0%	57	7.7%	264	230	34	211	188	23	28.3%	37.5%
	divalproex sodium*	1,898	347	305	5.7%	69	9.3%	252	202	50	216	176	40	27.4%	41.8%
	zonisamide*	1,529	295	261	4.9%	59	7.9%	197	155	42	161	128	33	33.2%	47.5%
	venlafaxine*	1,406	254	229	4.3%	41	5.5%	176	147	29	136	113	23	30.7%	42.1%
	nortriptyline	947	253	226	4.2%	41	5.5%	149	120	29	100	81	19	41.1%	52.6%
	onabotulinumtoxinA*	922	234	103	1.9%	161	21.7%	166	26	140	120	12	108	29.1%	88.9%
	carvedilol	708	150	128	2.4%	26	3.5%	114	94	20	95	78	17	24.0%	37.3%
	verapamil*	596	122	104	1.9%	28	3.8%	79	59	20	61	47	14	35.2%	51.6%
	doxepin	594	118	102	1.9%	22	3.0%	79	66	13	63	54	9	33.1%	44.1%
	valproic acid*	50	15	14	0.3%	1	0.1%	9	8	1	7	6	1	40.0%	46.7%
	timolol*	20	3	3	0.1%	0	0.0%	3	3	0	2	2	0	0.0%	0.0%

** Indicates drugs with FDA or compendia supported indication for acute or prophylactic use in treating migraine or headache.*

Table 4 shows the number of different acute and prophylactic medications taken by beneficiaries for ≥60 days and ≥90 days during the 17 month observation period.

- 1,544 beneficiaries had ≥60 days of therapy with 2 or more prophylactic agents, and
- 1,174 beneficiaries had ≥90 days of therapy with 2 or more prophylactic agents.

TABLE 4: Number of Acute and Prophylactic Medications Used by Beneficiaries for 60+ and 90+ Days
(January 1, 2017 - May 31, 2018)

			TOTAL		Pharmacy Program					
					FFS		UHC		MAG	
			Diagnosis		Diagnosis		Diagnosis		Diagnosis	
			Episodic Only	Chronic	Episodic Only	Chronic	Episodic Only	Chronic	Episodic Only	Chronic
Number of Drugs Used for 60+ Days	Acute Treatment	0	3,421	365	909	73	1,227	151	1,285	141
		1	1,298	229	154	25	532	104	612	100
		2	484	100	56	16	186	38	242	46
		3+	177	49	19	6	56	19	102	24
	Phrophylactic Treatment	0	2,468	164	778	47	842	67	848	50
		1	1,713	234	224	36	693	99	796	99
		2	807	197	102	19	325	85	380	93
		3+	392	148	34	18	141	61	217	69
Number of Drugs Used for 90+ Days	Acute Treatment	0	3,978	446	982	84	1,452	179	1,544	183
		1	1,031	211	116	25	420	100	495	86
		2	297	64	32	8	106	25	159	31
		3+	74	22	8	3	23	8	43	11
	Phrophylactic Treatment	0	2,911	230	843	57	1,017	89	1,051	84
		1	1,565	246	201	35	633	108	731	103
		2	660	173	71	14	259	84	330	75
		3+	244	94	23	14	92	31	129	49

CONCLUSIONS AND RECOMMENDATIONS

As of May 2018, there were 4,205 beneficiaries enrolled in Mississippi Medicaid who were age 18 or older and were diagnosed with episodic or chronic migraine. All of these beneficiaries could be potential candidates Aimovig and subsequent CGRP inhibitors.

Board action requested:

DOM and MS-DUR have examined prior authorization criteria being proposed by other state Medicaid agencies and commercial payers for Aimovig®. Some potential criteria are listed below along with comments from the Institute for Clinical and Economic Review (ICER):[17]

- Initial therapy must occur after consult with a neurologist, or must be prescribed by a neurologist.
    - *"Most migraine is cared for by clinicians who are not specialists in neurology or pain management, and access to these specialists can be quite limited in rural areas. Thus, to maximize access to CGRP inhibitors for appropriate patients, should primary care physicians be initially prescribing them? On the other hand, these medications have a new mechanism of action, have very limited safety data, and are given as a self-administered injection, which will require patients to be taught how to properly store and administer the treatment. Is access too limited if only specialists are first allowed to prescribe them?"*
- Failure on X number or more approved prophylactic treatments prior to use of new CGRP targeting products.
    - *"For patients who have no other options for preventive therapy, the ICER CTAF panel voted that there was adequate evidence to demonstrate a positive net health benefit with the CGRP inhibitors in patients with chronic migraine but not in episodic migraine. However, there were some concerns that the patients most likely to receive these agents first were not represented in the clinical trial populations (e.g., those for whom more than three preventive therapies have failed). Patients may also use a CGRP inhibitor in combination with existing prevention rather than as monotherapy, and currently there is no evidence on the benefits and risks comparing these approaches."*
- No presence of comorbid conditions that might be a safety concern for systemic CGRP repression.
    - *"The currently available trials of erenumab and other CGRP's inhibitors in development, such as fremanezumab and galcanezumab, show treatment benefits with few harms. However, these trials assessed outcomes by 12 or 24 weeks, and there remains uncertainty in any durability of effects and AEs from prolonged use. These interventions are the first in the CGRP inhibitor class, and some concerns exist about the long-term effects of continuous blocking of CGRP or its receptor due to*

[17] ICER Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value Final Evidence Report July 3, 2018: Available from: https://icer-review.org/material/cgrp-final-report/

CGRP's cardiovascular protective role. If patients, particularly chronic migraine patients, are expected to take CGRP inhibitors for a long duration (> 1 year), studies with longer follow-up are needed. In its review of erenumab, the FDA specifically requested postmarketing surveillance data for liver toxicity, myocardial infarction, and stroke among patients receiving erenumab."

- Potential limitations on initial length of coverage.
    - *"As with any new mechanism of action, limitations and uncertainties in the evidence base influence decision-making. For the CGRP inhibitors, due to the limitations in terms of populations studied and short-term trial duration described above, clinicians may reasonably exercise restraint in prescribing so as to allow more safety data to unfold. The FDA is requiring additional post-marketing studies of erenumab in pregnant women to identify potential maternal, fetal, and infant serious adverse events. Post-marketing surveillance for liver toxicity, myocardial infarction, and stroke after exposure to erenumab is also requested. In addition, clinicians should have extensive conversations with patients to convey the uncertainties about the new interventions and to understand patient preferences."*

MS-DUR is seeking input from the Board about potential criteria for managing utilization in this new class.

FDA DRUG SAFETY COMMUNICATIONS

May 2018 – August 2018

- FDA warns about increased risk of cancer relapse with long-term use of azithromycin (Zithromax, Zmax) antibiotic after donor stem cell transplant
  8/3/2018
- FDA reinforces safety information about serious low blood sugar levels and mental health side effects with fluoroquinolone antibiotics; requires label changes
  7/10/2018
- Risk of serious and potentially fatal blood disorder prompts FDA action on oral over-the-counter benzocaine products used for teething and mouth pain and prescription local anesthetics
  5/23/2018
- FDA Drug Safety Communication: FDA to evaluate potential risk of neural tube birth defects with HIV medicine dolutegravir (Juluca, Tivicay, Triumeq)
  5/18/2018

APPENDIX

MS-DUR BOARD
COMMON ABBREVIATIONS

AWP	Any Willing Provider, Average Wholesale Price
BENE	Beneficiary
CAH	Critical Access Hospital
CCO	Coordinated Care Organization
CDC	Centers for Disease Control
CHIP	Children's Health Insurance Program
CMS	Center for Medicare and Medicaid Services
COB	Coordination of Benefits
CPC	Complex Pharmaceutical Care
DME	Durable Medical Equipment
DOC	Department of Corrections
DOM	Division of Medicaid
DUR	Drug Utilization Review
EOB	Explanation of Benefits
EPSDT	Early and Periodic Screening, Diagnosis and Treatment
FA	Fiscal Agent
FFS	Fee For Service
FPW	Family Planning Waiver
FQHC	Federally Qualified Health Clinic
FY	Fiscal Year
HB	House Bill
HCPCS/ HEIDIS	Health Plan Employer Data and Information Set
HHS	Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability
IDD	Intellectual and Developmental Disabilities
LTC	Long Term Care
MAG	Magnolia Health
MEDD	Morphine Equivalent Daily Dose
MSCAN	Mississippi Coordinated Access Network
MSDH	Mississippi State Department of Health
NADAC	National Average Drug Acquisition Cost
NDC	National Drug Code
P&T	Pharmacy and Therapeutics
PA	Prior Authorization
PBM	Pharmacy Benefit Manager
PDL	Preferred Drug List
PI	Program Integrity
PIP	Performance Improvement Program
POS	Point of Sale, Place of Service, Point of Service
Pro-DUR	Prospective Drug Use Review
OTC	Over the Counter
QI	Quality Indicator
QIO	Quality Improvement Organization
QM	Quality Management
RA	Remittance Advise
REOMB	Recipient's Explanation of Medicaid Benefits
Retro-DUR	Retrospective Drug Utilization Review
RFI	Request for Information
RFP	Request for Proposal
RHC	Rural Health Clinic
SB	Senate Bill
SCHIP	State Child Health Insurance Program
SMART PA	Conduent's Pharmacy Application (SmartPA) is a proprietary electronic prior authorization system used for Medicaid fee for service claims
SPA	State Plan Amendment
UHC	United Healthcare
UM/QIO	Utilization Management and Quality Improvement Organization
UPDL	Universal Preferred Drug List
UR	Utilization Review
VFC	Vaccines for Children
WAC	Wholesale Acquisition Cost
WIC	Women, Infants, Children
340B	Federal Drug Discount Program