OKLAHOMA
Health Care Authority

Drug Utilization Review Board

OHCA Webinar
Wednesday,
April 14, 2021
4:00pm

Please register for the webinar at:
https://zoom.us/webinar/register/WN_p6_EPdLkQ8aw_rG7VewQXQ
After registering, you will receive a confirmation email
containing information about joining the webinar.

The University of Oklahoma
Health Sciences Center
COLLEGE OF PHARMACY
PHARMACY MANAGEMENT CONSULTANTS

MEMORANDUM

TO: Drug Utilization Review (DUR) Board Members

FROM: Michyla Adams, Pharm.D.

SUBJECT: Packet Contents for DUR Board Meeting – April 14, 2021

DATE: March 31, 2021

NOTE: In response to COVID-19, the April 2021 DUR Board meeting will be held via OHCA webinar at 4:00pm. Please register for the meeting using the following website address: https://zoom.us/webinar/register/WN_p6_EPdLkQ8aw_rG7VewQXQ After registering, you will receive a confirmation email containing information about joining the webinar.

Enclosed are the following items related to the April meeting. Material is arranged in order of the agenda.

Call to Order

Public Comment Forum

Action Item – Approval of DUR Board Meeting Minutes – Appendix A

Update on Medication Coverage Authorization Unit/SoonerPsych Program Update – Appendix B

Action Item - Vote to Prior Authorize Bafiertam™ (Monomethyl Fumarate), Kesimpta® (Ofatumumab), and Zeposia® (Ozanimod) – Appendix C

Action Item – Vote to Prior Authorize Sevenfact® [Coagulation Factor VIIA (Recombinant)-jncw] – Appendix D

Action Item – Vote to Prior Authorize Sogroya® (Somapacitan-beco) – Appendix E

Action Item – Vote to Prior Authorize Nyvepria™ (Pegfilgrastim-apgf) – Appendix F

Action Item – Vote to Prior Authorize Barhemsys® (Amisulpride) – Appendix G

Action Item – Vote to Prior Authorize Orladeyo™ (Berotralstat) – Appendix H

Action Item – Vote to Prior Authorize Breyanzi® (Lisocabtagene Maraleucel), Monjuvi® (Tafasitamab-cxix), Romidepsin 27.5mg/5.5mL Vial, Tecartus™ (Brexucabtagene Autoleucel), and Ukoniq™ (Umbralisib) – Appendix I

Action Item – Annual Review of Antihypertensive Medications – Appendix J

Annual Review of Lung Cancer Medications and 30-Day Notice to Prior Authorize Cosela™ (Trilaciclib), Gavreto™ (Pralsetinib), Retevmo™ (Selpercatinib), Tabrecta™ (Capmatinib), and Zepzelca™ (Lurbinectedin) – Appendix K

Annual Review of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat) – Appendix L

Annual Review of Anti-Diabetic Medications and 30-Day Notice to Prior Authorize Lyumjev™ (Insulin Lispro-aabc) – Appendix M

Annual Review of Muscular Dystrophy Medications and 30-Day Notice to Prior Authorize Amondys 45™ (Casimersen), Viltepso® (Viltolarsen), and Vyondys 53™ (Golodirsen) – Appendix N

Annual Review of Heart Failure Medications and 30-Day Notice to Prior Authorize Verquvo® (Vericiguat) – Appendix O

U.S. Food and Drug Administration (FDA) and Drug Enforcement Administration (DEA) Updates – Appendix P

Future Business

Adjournment

Oklahoma Health Care Authority

Drug Utilization Review Board
(DUR Board)
Meeting – April 14, 2021 @ 4:00pm

Oklahoma Health Care Authority (OHCA) Webinar
Please register for the meeting at:
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AGENDA

Discussion and Action on the Following Items:

Items to be presented by Dr. Muchmore, Chairman:

1. Call to Order

A. Roll Call – Dr. Wilcox

DUR Board Members:	**Telephone Conference Participants**
Dr. Stephen Anderson –	participating via Zoom teleconference
Dr. Jennifer de los Angeles –	participating via Zoom teleconference
Ms. Jennifer Boyett –	participating via Zoom teleconference
Dr. Markita Broyles –	participating via Zoom teleconference
Dr. Theresa Garton –	participating via Zoom teleconference
Dr. Megan Hanner –	participating via Zoom teleconference
Dr. Lynn Mitchell –	participating via Zoom teleconference
Dr. John Muchmore –	participating via Zoom teleconference
Dr. Lee Muñoz –	participating via Zoom teleconference
Dr. James Osborne –	participating via Zoom teleconference

Public Access to Meeting via Zoom:

Please register for the meeting at:
https://zoom.us/webinar/register/WN_p6_EPdLkQ8aw_rG7VewQXQ

Or join by phone:
Dial: +1-253-215-8782 or +1-346-248-7799
Webinar ID: 934 3290 1479
Passcode: 72711553

Public Comment for Meeting:

- Speakers who wish to sign up for public comment at the OHCA DUR Board meeting may do so in writing by visiting www.okhca.org/DUR and completing the Speaker Registration Form. Completed Speaker Registration forms should be submitted to *DURPublicComment@okhca.org*. Forms must be received after the DUR Board agenda has been posted and no later than 24 hours before the meeting.
- The DUR Board meeting will allow public comment and time will be limited to 40 minutes total for all speakers during the meeting. Each speaker will be given 5 minutes to speak at the public hearing. If more than 8 speakers properly request to speak, time will be divided evenly.
- Only 1 speaker per manufacturer will be allowed.

Items to be presented by Dr. Muchmore, Chairman:

2. Public Comment Forum

A. Acknowledgment of Speakers for Public Comment

Items to be presented by Dr. Muchmore, Chairman:

3. Action Item – Approval of DUR Board Meeting Minutes – See Appendix A

A. March 10, 2021 DUR Minutes – Vote
B. March 10, 2021 DUR Recommendation Memorandum

Items to be presented by Dr. Ha, Dr. Nawaz, Dr. Muchmore, Chairman:

4. Update on Medication Coverage Authorization Unit/SoonerPsych Program Update – See Appendix B

A. Pharmacy Helpdesk Activity for March 2021
B. Medication Coverage Activity for March 2021
C. SoonerPsych Program Update

Items to be presented by Dr. Nawaz, Dr. Muchmore, Chairman:

5. Action Item – Vote to Prior Authorize Bafiertam™ (Monomethyl Fumarate), Kesimpta® (Ofatumumab), and Zeposia® (Ozanimod) – See Appendix C

A. New U.S Food and Drug Administration (FDA) Approval(s)
B. College of Pharmacy Recommendations

Items to be presented by Dr. Ratterman, Dr. Muchmore, Chairman:

6. Action Item – Vote to Prior Authorize Sevenfact® [Coagulation Factor VIIa (Recombinant)-jncw] – See Appendix D

A. Introduction
B. Oklahoma Health Care Authority Recommendations

Items to be presented by Dr. Wilson, Dr. Muchmore, Chairman:

7. Action Item – Vote to Prior Authorize Sogroya® (Somapacitan-beco) – See Appendix E

A. New U.S. Food and Drug Administration (FDA) Approval(s)
B. College of Pharmacy Recommendations

Items to be presented by Dr. Ha, Dr. Muchmore, Chairman:

8. Action Item – Vote to Prior Authorize Nyvepria™ (Pegfilgrastim-apgf) – See Appendix F

A. New U.S. Food and Drug Administration (FDA) Approval(s)
B. Nyvepria™ (Pegfilgrastim-apgf) Product Summary
C. Cost Comparison: Pegfilgrastim Products
D. College of Pharmacy Recommendations

Items to be presented by Dr. Ha, Dr. Muchmore, Chairman:

9. Action Item – Vote to Prior Authorize Barhemsys® (Amisulpride) – See Appendix G

A. New U.S. Food and Drug Administration (FDA) Approval(s)
B. Barhemsys® (Amisulpride) Product Summary
C. Cost Comparison: Anti-Emetics for Postoperative Nausea and Vomiting (PONV)
D. College of Pharmacy Recommendations

Items to be presented by Dr. Chandler, Dr. Muchmore, Chairman:

10. Vote to Prior Authorize Orladeyo™ (Berotralstat) – See Appendix H

A. Introduction
B. College of Pharmacy Recommendations

Items to be presented by Dr. Borders, Dr. Muchmore, Chairman:

11. Vote to Prior Authorize Breyanzi® (Lisocabtagene Maraleucel), Monjuvi® (Tafasitamab-cxix), Romidepsin 27.5mg/5.5mL Vial, Tecartus™ (Brexucabtagene Autoleucel), and Ukoniq™ (Umbralisib) – See Appendix I

A. New U.S. Food and Drug Administration (FDA) Approval(s) and Indication(s)

B. College of Pharmacy Recommendations

Items to be presented by Dr. Ha, Dr. Muchmore, Chairman:

12. Action Item – Annual Review of Antihypertensive Medications – See Appendix J

A. Current Prior Authorization Criteria
B. Utilization of Antihypertensive Medications
C. Prior Authorization of Antihypertensive Medications
D. Market News and Updates
E. College of Pharmacy Recommendations
F. Utilization Details of Antihypertensive Medications

Items to be presented by Dr. Borders, Dr. Muchmore, Chairman:

13. Annual Review of Lung Cancer Medications and 30-Day Notice to Prior Authorize Cosela™ (Trilaciclib), Gavreto™ (Pralsetinib), Retevmo™ (Selpercatinib), Tabrecta™ (Capmatinib), and Zepzelca™ (Lurbinectedin) – See Appendix K

A. Introduction
B. Current Prior Authorization Criteria
C. Utilization of Lung Cancer Medications
D. Market News and Updates
E. Product Summaries
F. College of Pharmacy Recommendations
G. Utilization Details of Lung Cancer Medications

Items to be presented by Dr. Borders, Dr. Muchmore, Chairman:

14. Annual Review of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat) – See Appendix L

A. Current Prior Authorization Criteria
B. Utilization of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat)
C. Prior Authorization of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat)
D. Market News and Updates
E. College of Pharmacy Recommendations

Items to be presented by Dr. Nawaz, Dr. Muchmore, Chairman:

15. Annual Review of Anti-Diabetic Medications and 30-Day Notice to Prior Authorize Lyumjev™ (Insulin Lispro-aabc) – See Appendix M

A. Current Prior Authorization Criteria
B. Utilization of Anti-Diabetic Medications
C. Prior Authorization of Anti-Diabetic Medications
D. Market News and Updates
E. Lyumjev™ (Insulin Lispro-aabc) Product Summary
F. College of Pharmacy Recommendations
G. Utilization Details of Non-Insulin Anti-Diabetic Medications
H. Utilization Details of Insulin Medications

Items to be presented by Dr. Chandler, Dr. Muchmore, Chairman:

16. Annual Review of Muscular Dystrophy Medications and 30-Day Notice to Prior Authorize Amondys 45™ (Casimersen), Viltepso® (Viltolarsen), and Vyondys 53™ (Golodirsen) – See Appendix N

A. Current Prior Authorization Criteria
B. Utilization of Muscular Dystrophy Medications
C. Prior Authorization of Muscular Dystrophy Medications
D. Market News and Updates
E. Product Summaries

F. Cost Comparison: Duchenne Muscular Dystrophy (DMD) Exon-Skipping Therapies
G. College of Pharmacy Recommendations
H. Utilization Details of Muscular Dystrophy Medications

Items to be presented by Dr. Wilson, Dr. Muchmore, Chairman:

17. Annual Review of Heart Failure Medications and 30-Day Notice to Prior Authorize Verquvo® (Vericiguat) – See Appendix O

A. Current Prior Authorization Criteria
B. Utilization of Heart Failure Medications
C. Prior Authorization of Heart Failure Medications
D. Market News and Updates
E. Verquvo® (Vericiguat) Product Summary
F. College of Pharmacy Recommendations
G. Utilization Details of Heart Failure Medications

Items to be presented by Dr. Ha, Dr. Muchmore, Chairman:

18. U.S. Food and Drug Administration (FDA) and Drug Enforcement Administration (DEA) Updates – See Appendix P

Items to be presented by Dr. Adams, Dr. Muchmore, Chairman:

19. Future Business* (Upcoming Product and Class Reviews)

A. Annual Review of the Pharmacy Benefit
B. Alzheimer's Disease Medications
C. Bladder Control Medications
D. Various Systemic Antibiotics

**Future product and class reviews subject to change.*

20. Adjournment

NOTE: An analysis of the atypical [Aged, Blind, and Disabled (ABD)] patient subgroup of the Oklahoma Medicaid population has been performed pertaining to all recommendations included in this DUR Board meeting packet to ensure fair and knowledgeable deliberation of the potential impact of the recommendations on this patient population.

Appendix A

OKLAHOMA HEALTH CARE AUTHORITY
DRUG UTILIZATION REVIEW (DUR) BOARD MEETING
MINUTES OF MEETING MARCH 10, 2021

BOARD MEMBERS:	PRESENT	ABSENT
Stephen Anderson, Pharm.D.	x	
Jennifer de los Angeles, Pharm.D., BCOP	x	
Jennifer Boyett, MHS; PA-C	x	
Markita Broyles, D.Ph.; MBA	x	
Theresa Garton, M.D.	x	
Megan A. Hanner, D.O.	x	
Lynn Mitchell, M.D.; Vice Chairwoman	x	
John Muchmore, M.D.; Ph.D.; Chairman		x
Lee Muñoz, D.Ph.	x	
James Osborne, Pharm.D.	x	

COLLEGE OF PHARMACY STAFF:	PRESENT	ABSENT
Michyla Adams, Pharm.D.; DUR Manager	x	
Rebekah Bargewell; Administrative Assistant		x
Wendi Chandler, Pharm.D.; Clinical Pharmacist	x	
Andrew Craig; Database Analyst		x
Lisa Daniel, Pharm.D.; Pharmacy Resident	x	
Erin Ford, Pharm.D.; Clinical Pharmacist		x
Mark Fuelling; Client Support Analyst		x
Thomas Ha, Pharm.D.; Clinical Pharmacist	x	
Katrina Harris, Pharm.D.; Clinical Pharmacist	x	
Robert Klatt, Pharm.D.; Clinical Pharmacist	x	
Amy Miller; Operations Coordinator		x
Brandy Nawaz, Pharm.D.; Clinical Pharmacist	x	
Karen O'Neill, Pharm.D.; Clinical Pharmacist		x
Wynn Phung, Pharm.D.; Clinical Pharmacist		x
Leslie Robinson, D.Ph.; Pharmacy PA Coordinator		x
Vickie Sams, CPhT.; Quality/Training Coordinator	x	
Grant H. Skrepnek, Ph.D.; Associate Professor		x
Regan Smith, Pharm.D.; Clinical Pharmacist	x	
Ashley Teel, Pharm.D.; Clinical Pharmacist	x	
Jacquelyn Travers, Pharm.D.; Practice Facilitating Pharmacist	x	
Devin Wilcox, D.Ph.; Pharmacy Director	x	
Justin Wilson, Pharm.D.; Clinical Pharmacist	x	
PA Oncology Pharmacists: Allison Baxley, Pharm.D., BCOP		x
Emily Borders, Pharm.D., BCOP	x	
Sarah Schmidt, Pharm.D., BCPS, BCOP		x
Graduate Students: Matthew Dickson, Pharm.D.	x	
Michael Nguyen, Pharm.D.	x	
Corby Thompson, Pharm.D.	x	
Laura Tidmore, Pharm.D.	x	
Visiting Pharmacy Student(s): N/A		

OKLAHOMA HEALTH CARE AUTHORITY STAFF:	PRESENT	ABSENT
Melody Anthony, Chief State Medicaid Director; Chief Operating Officer		x
Ellen Buettner, Chief of Staff		x
Kevin Corbett, C.P.A.; Chief Executive Officer		x
Terry Cothran, D.Ph.; Pharmacy Director	x	
Susan Eads, J.D.; Director of Litigation	x	
Michael Herndon, D.O.; Chief Medical Officer		x
Jill Ratterman, D.Ph.; Clinical Pharmacist	x	
Paula Root, M.D.; Senior Medical Director	x	
Michelle Tahah, Pharm.D.; Clinical Pharmacist	x	

OTHERS PRESENT:	
Evie Knisely, Novartis	Tom Telly, Ascendis
Robert Greely, Biogen	Joe Garcia, AbbVie
Rick Dabner, Alnylam	Porscha Showers, Gilead
Joe Payne, Viela	Kristi Kemp, Abbvie
Lori Howarth, Bayer	Audrey Rattan, Alkermes
Shellie Keast, Mercer	Roger Grotzinger, BMS
Melanie Curlett, Takeda	Doug Wood, ViiV Health
Matthew Wright, Artia Solutions	David Prather, Novo Nordisk
Brian Maves, Pfizer	Adam Kopp, Zogenix
Mark Kaiser, Otuska	Nima Nabavi, Amgen
Dave Miley, Teva	Lee Stout, Chiesi
David Poskey, UCB	Jana Kinlock, Takeda
Andrew Delgado, BMS	David Large, Biohaven
Tony Salicos, Greenwich Biosciences	Sarah Sanders, Novartis
Gina Heinen, Novo Nordisk	Marilyn Semenchuk, Biocodex
Aaron Shaw, Boehringer-Ingelheim	Lindsey Walter, Novartis
Bob Atkins, Biogen	Dan Joy, Boehringer-Ingelheim
Tim Grogan, OK Hemophilia Foundation	Jeanette Jones, OK Hemophilia Foundation

PRESENT FOR PUBLIC COMMENT:	
Jeanette Jones	OK Hemophilia Foundation
Evie Knisely	Novartis
Robert Greely	Biogen

AGENDA ITEM NO. 1: **CALL TO ORDER**

1A: ROLL CALL

Dr. Mitchell called the meeting to order. Roll call by Dr. Wilcox established the presence of a quorum.

ACTION: NONE REQUIRED

AGENDA ITEM NO. 2: **PUBLIC COMMENT FORUM**

2A: AGENDA ITEM NO. 16 JEANETTE JONES
2B: AGENDA ITEM NO. 17 EVIE KNISELY
2C: AGENDA ITEM NO. 17 ROBERT GREELY
ACTION: NONE REQUIRED

AGENDA ITEM NO. 3: **APPROVAL OF DUR BOARD MEETING MINUTES**

3A: FEBRUARY 17, 2021 DUR MINUTES – VOTE
3B: FEBRUARY 17, 2021 DUR RECOMMENDATIONS MEMORANDUM

3C: CORRESPONDENCE
Materials included in agenda packet; presented by Dr. Mitchell
Dr. Garton moved to approve; seconded by Dr. Broyles
ACTION: MOTION CARRIED

AGENDA ITEM NO. 4: QUARTERLY REVIEW OF THE MEDICATION THERAPY MANAGEMENT (MTM) PROGRAM
4A: MTM PROGRAM UPDATE
Materials included in agenda packet; presented by Dr. Smith
ACTION: NONE REQUIRED

AGENDA ITEM NO. 5: UPDATE ON MEDICATION COVERAGE AUTHORIZATION UNIT/SPRING 2021 PIPELINE UPDATE
5A: PHARMACY HELPDESK ACTIVITY FOR FEBRUARY 2021
5B: MEDICATION COVERAGE ACTIVITY FOR FEBRUARY 2021
5C: SPRING 2021 PIPELINE UPDATE
Materials included in agenda packet; presented by Dr. Nawaz, Dr. Wilson
ACTION: NONE REQUIRED

AGENDA ITEM NO. 6: VOTE TO PRIOR AUTHORIZE ANJESO® (MELOXICAM INJECTION) AND LICART™ (DICLOFENAC EPOLAMINE TOPICAL SYSTEM)
6A: NEW U.S. FOOD AND DRUG ADMINISTRATION (FDA) APPROVAL(S)
6B: COLLEGE OF PHARMACY RECOMMENDATIONS
Materials included in agenda packet; presented by Dr. Wilson
Dr. Anderson moved to approve; seconded by Dr. Garton
ACTION: MOTION CARRIED

AGENDA ITEM NO. 7: VOTE TO PRIOR AUTHORIZE OXLUMO™ (LUMASIRAN)
7A: INTRODUCTION
7B: COLLEGE OF PHARMACY RECOMMENDATIONS
Materials included in agenda packet; presented by Dr. Wilson
Dr. Garton moved to approve; seconded by Dr. Hanner
ACTION: MOTION CARRIED

AGENDA ITEM NO. 8: VOTE TO PRIOR AUTHORIZE FINTEPLA® (FENFLURAMINE)
8A: NEW U.S. FOOD AND DRUG ADMINISTRATION (FDA) APPROVAL(S) AND INDICATION(S)
8B: COLLEGE OF PHARMACY RECOMMENDATIONS
Materials included in agenda packet; presented by Dr. Ha
Dr. Garton moved to approve; seconded by Dr. Broyles
ACTION: MOTION CARRIED

AGENDA ITEM NO. 9: VOTE TO PRIOR AUTHORIZE TERIPARATIDE
9A: INTRODUCTION
9B: COLLEGE OF PHARMACY RECOMMENDATIONS
Materials included in agenda packet; presented by Dr. Daniel
Dr. Anderson moved to approve; seconded by Dr. Garton
ACTION: MOTION CARRIED

AGENDA ITEM NO. 10: VOTE TO PRIOR AUTHORIZE ZOKINVY™ (LONAFARNIB)

10A: INTRODUCTION

10B: COLLEGE OF PHARMACY RECOMMENDATIONS

Materials included in agenda packet; presented by Dr. Nawaz
Dr. Broyles moved to approve; seconded by Dr. Garton

ACTION: MOTION CARRIED

AGENDA ITEM NO. 11: VOTE TO PRIOR AUTHORIZE NURTEC™ ODT (RIMEGEPANT) AND VYEPTI® (EPTINEZUMAB-JJMR)

11A: INTRODUCTION

11B: COLLEGE OF PHARMACY RECOMMENDATIONS

Materials included in agenda packet; presented by Dr. Chandler
Dr. Broyles moved to approve; seconded by Dr. Anderson

ACTION: MOTION CARRIED

AGENDA ITEM NO. 12: VOTE TO PRIOR AUTHORIZE INQOVI® (DECITABINE/CEDAZURIDINE), ONUREG® (AZACITIDINE), AND RIABNI™ (RITUXIMAB-ARRX)

12A: INTRODUCTION

12B: NEW U.S. FOOD AND DRUG ADMINISTRATION (FDA) APPROVAL(S) AND INDICATION(S)

12C: COLLEGE OF PHARMACY RECOMMENDATIONS

Materials included in agenda packet; presented by Dr. Borders
Dr. Garton moved to approve; seconded by Dr. Broyles

ACTION: MOTION CARRIED

AGENDA ITEM NO. 13: ANNUAL REVIEW OF QUTENZA® (CAPSAICIN 8% PATCH)

13A: CURRENT PRIOR AUTHORIZATION CRITERIA

13B: UTILIZATION OF QUTENZA® (CAPSAICIN 8% PATCH)

13C: PRIOR AUTHORIZATION OF QUTENZA® (CAPSAICIN 8% PATCH)

13D: MARKET NEWS AND UPDATES

13E: COLLEGE OF PHARMACY RECOMMENDATIONS

Materials included in agenda packet; presented by Dr. Wilson
Dr. Broyles moved to approve; seconded by Dr. Garton

ACTION: MOTION CARRIED

AGENDA ITEM NO. 14: ANNUAL REVIEW OF LYMPHOMA MEDICATIONS AND 30-DAY NOTICE TO PRIOR AUTHORIZE BREYANZI® (LISOCABTAGENE MARALEUCEL), MONJUVI® (TAFASITAMAB-CXIX), ROMIDEPSIN 27.5MG/5.5ML VIAL, TECARTUS™ (BREXUCABTAGENE AUTOLEUCEL), AND UKONIQ™ (UMBRALISIB)

14A: INTRODUCTION

14B: CURRENT PRIOR AUTHORIZATION CRITERIA

14C: UTILIZATION OF LYMPHOMA MEDICATIONS

14D: PRIOR AUTHORIZATION OF LYMPHOMA MEDICATIONS

14E: MARKET NEWS AND UPDATES

14F: PRODUCT SUMMARIES

14G: COLLEGE OF PHARMACY RECOMMENDATIONS

14H: UTILIZATION OF LYMPHOMA MEDICATIONS

Materials included in agenda packet; presented by Dr. Borders

ACTION: NONE REQUIRED

AGENDA ITEM NO. 15: ANNUAL REVIEW OF LUTATHERA® (LUTETIUM LU-177 DOTATATE) AND VITRAKVI® (LAROTRECTINIB)

15A: INTRODUCTION
15B: CURRENT PRIOR AUTHORIZATION CRITERIA
15C: UTILIZATION OF LUTATHERA® (LUTETIUM LU-177 DOTATATE) AND VITRAKVI® (LAROTRECTINIB)
15D: PRIOR AUTHORIZATION OF LUTATHERA® (LUTETIUM LU-177 DOTATATE) AND VITRAKVI® (LAROTRECTINIB)
15E: MARKET NEWS AND UPDATES
15F: COLLEGE OF PHARMACY RECOMMENDATIONS

Materials included in agenda packet; presented by Dr. Borders

ACTION: NONE REQUIRED

AGENDA ITEM NO. 16: ANNUAL REVIEW OF HEMOPHILIA MEDICATIONS AND 30-DAY NOTICE TO PRIOR AUTHORIZE SEVENFACT® [COAGULATION FACTOR VIIA (RECOMBINANT)-JNCW]

16A: CURRENT PRIOR AUTHORIZATION CRITERIA
16B: UTILIZATION OF HEMOPHILIA MEDICATIONS
16C: PRIOR AUTHORIZATION OF HEMOPHILIA MEDICATIONS
16D: MARKET NEWS AND UPDATES
16E: SEVENFACT® [COAGULATION FACTOR VIIA (RECOMBINANT)-JNCW] PRODUCT SUMMARY
16F: COST COMPARISON
16G: COLLEGE OF PHARMACY RECOMMENDATIONS
16H: UTILIZATION DETAILS OF HEMOPHILIA MEDICATIONS

Materials included in agenda packet; presented by Dr. Ratterman

ACTION: NONE REQUIRED

AGENDA ITEM NO. 17: ANNUAL REVIEW OF MULTIPLE SCLEROSIS (MS) MEDICATIONS AND 30-DAY NOTICE TO PRIOR AUTHORIZE BAFIERTAM™ (MONOMETHYL FUMARATE), KESIMPTA® (OFATUMUMAB), AND ZEPOSIA® (OZANIMOD)

17A: CURRENT PRIOR AUTHORIZATION CRITERIA
17B: UTILIZATION OF MS MEDICATIONS
17C: PRIOR AUTHORIZATION OF MS MEDICATIONS
17D: MARKET NEWS AND UPDATES
17E: PRODUCT SUMMARIES
17F: COLLEGE OF PHARMACY RECOMMENDATIONS
17G: UTILIZATION DETAILS OF MS MEDICATIONS

Materials included in agenda packet; presented by Dr. Nawaz

ACTION: NONE REQUIRED

AGENDA ITEM NO. 18: ANNUAL REVIEW OF HEREDITARY ANGIOEDEMA (HAE) MEDICATIONS AND 30-DAY NOTICE TO PRIOR AUTHORIZE ORLADEYO™ (BEROTRALSTAT)

18A: CURRENT PRIOR AUTHORIZATION CRITERIA
18B: UTILIZATION OF HAE MEDICATIONS
18C: PRIOR AUTHORIZATION OF HAE MEDICATIONS
18D: MARKET NEWS AND UPDATES
18E: ORLADEYO™ (BEROTRALSTAT) PRODUCT SUMMARY
18F: COLLEGE OF PHARMACY RECOMMENDATIONS
18G: UTILIZATION DETAILS OF HAE MEDICATIONS

Materials included in agenda packet; presented by Dr. Chandler

ACTION: NONE REQUIRED

<u>AGENDA ITEM NO. 19:</u> ANNUAL REVIEW OF GRANULOCYTE COLONY-STIMULATING FACTORS (G-CSFS) AND 30-DAY NOTICE TO PRIOR AUTHORIZE NYVEPRIA™ (PEGFILGRASTIM-APGF)

19A: CURRENT PRIOR AUTHORIZATION CRITERIA
19B: UTILIZATION OF G-CSFS
19C: PRIOR AUTHORIZATION OF G-CSFS
19D: MARKET NEWS AND UPDATES
19E: COLLEGE OF PHARMACY RECOMMENDATIONS
19F: UTILIZATION DETAILS OF G-CSFS

Materials included in agenda packet; presented by Dr. Ha

ACTION: NONE REQUIRED

<u>AGENDA ITEM NO. 20:</u> ANNUAL REVIEW OF ANTI-EMETIC MEDICATIONS AND 30-DAY NOTICE TO PRIOR AUTHORIZE BARHEMSYS® (AMISULPRIDE)

20A: CURRENT PRIOR AUTHORIZATION CRITERIA
20B: UTILIZATION OF ANTI-EMETIC MEDICATIONS
20C: PRIOR AUTHORIZATION OF ANTI-EMETIC MEDICATIONS
20D: MARKET NEWS AND UPDATES
20E: BARHEMSYS® (AMISULPRIDE) PRODUCT SUMMARY
20F: COLLEGE OF PHARMACY RECOMMENDATIONS
20G: UTILIZATION DETAILS OF ANTI-EMETIC MEDICATIONS

Materials included in agenda packet; presented by Dr. Ha

ACTION: NONE REQUIRED

<u>AGENDA ITEM NO. 21:</u> ANNUAL REVIEW OF GROWTH HORMONE PRODUCTS AND 30-DAY NOTICE TO PRIOR AUTHORIZE SOGROYA® (SOMAPACITAN-BECO)

21A: CURRENT PRIOR AUTHORIZATION CRITERIA
21B: UTILIZATION OF GROWTH HORMONE PRODUCTS
21C: PRIOR AUTHORIZATION OF GROWTH HORMONE PRODUCTS
21D: MARKET NEWS AND UPDATES
21E: SOGROYA® (SOMAPACITAN-BECO) PRODUCT SUMMARY
21F: COLLEGE OF PHARMACY RECOMMENDATIONS
21G: UTILIZATION DETAILS OF GROWTH HORMONE PRODUCTS

Materials included in agenda packet; presented by Dr. Wilson

ACTION: NONE REQUIRED

<u>AGENDA ITEM NO. 22:</u> U.S. FOOD AND DRUG ADMINISTRATION (FDA) AND DRUG ENFORCEMENT ADMINISTRATION (DEA) UPDATES

Materials included in agenda packet; presented by Dr. Nawaz

ACTION: NONE REQUIRED

<u>AGENDA ITEM NO. 23:</u> FUTURE BUSINESS* (UPCOMING PRODUCT AND CLASS REVIEWS)

23A: ANNUAL REVIEW OF THE PHARMACY BENEFIT
23B: ANTI-DIABETIC MEDICATIONS
23C: ANTIHYPERTENSIVE MEDICATIONS
23D: MUSCULAR DYSTROPHY MEDICATIONS

**Future business subject to change.*

Materials included in agenda packet; presented by Dr. Adams

ACTION: NONE REQUIRED

AGENDA ITEM NO. 24: **ADJOURNMENT**

The meeting was adjourned at 5:51pm.

The University of Oklahoma
Health Sciences Center
COLLEGE OF PHARMACY
PHARMACY MANAGEMENT CONSULTANTS

Memorandum

Date: March 11, 2021

To: Terry Cothran, D.Ph.
Pharmacy Director
Oklahoma Health Care Authority

From: Michyla Adams, Pharm.D.
Drug Utilization Review (DUR) Manager
Pharmacy Management Consultants

Subject: DUR Board Recommendations from Meeting of March 10, 2021

Recommendation 1: Quarterly Review of the Medication Therapy Management (MTM) Program

NO ACTION REQUIRED.

Recommendation 2: Spring 2021 Pipeline Update

NO ACTION REQUIRED.

Recommendation 3: Vote to Prior Authorize Anjeso® (Meloxicam Injection) and Licart™ (Diclofenac Epolamine Topical System)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the placement of Anjeso® (meloxicam injection) into the Special Prior Authorization (PA) Tier of the Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) Product Based Prior Authorization (PBPA) category with the following additional criteria in red:

Anjeso® (Meloxicam Injection) Approval Criteria:

1. An FDA approved diagnosis of management of moderate-to-severe pain, alone or in combination with non-nonsteroidal anti-inflammatory drug (NSAID) analgesics; and

2. Member must be 18 years of age or older; and
3. Prescriber must verify member will be well hydrated before Anjeso® administration to reduce the risk of renal toxicity; and
4. Anjeso® should be used for the shortest duration consistent with individual patient treatment goals; and
5. A patient-specific, clinically significant reason why the member cannot use oral meloxicam tablets or other Tier-1 NSAIDs must be provided; and
6. A quantity limit of 3 vials per 3 days will apply; and
7. For consideration of a longer duration of use, a patient-specific, clinically significant reason why the member cannot transition to an oral Tier-1 NSAID must be provided, along with the anticipated duration of treatment.

Additionally, the College of Pharmacy recommends the placement of Licart™ (diclofenac epolamine topical system) into the Special PA Tier of the NSAIDs PBPA category. The College of Pharmacy also recommends the addition of an age restriction of 12 years of age or younger for naproxen suspension and recommends moving ketoprofen capsules from Tier-1 to the Special PA Tier of the NSAIDs PBPA category and moving diclofenac extended-release (ER) tablets (Voltaren® XR) from Tier-1 to Tier-2 of the NSAIDs PBPA category based on net cost (additions and changes shown in red):

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)		
Tier-1	**Tier-2**	**Special PA**
celecoxib (Celebrex®) 50mg, 100mg, & 200mg caps	**diclofenac ER (Voltaren® XR)**	celecoxib (Celebrex®) 400mg caps
diclofenac epolamine (Flector® Patch)	diclofenac potassium (Cataflam®)	diclofenac (Zorvolex®)
~~**diclofenac ER (Voltaren® XR)**~~	diclofenac sodium/ misoprostol (Arthrotec®)	**diclofenac epolamine (Licart™) topical system**
diclofenac sodium (Voltaren®) 50mg & 75mg tabs	diclofenac sodium (Voltaren®) 25mg tabs	diclofenac potassium (Cambia®) powder pack
diclofenac sodium 1% (Voltaren® Gel)	etodolac (Lodine®) 200mg & 300mg caps	diclofenac potassium (Zipsor®) caps
etodolac (Lodine®) 400mg & 500mg tabs	etodolac ER (Lodine® XL)	diclofenac sodium (Dyloject™) inj
flurbiprofen (Ansaid®)	naproxen sodium (Anaprox®) 275mg & 550mg tabs	diclofenac sodium (Pennsaid®) topical drops
ibuprofen (Motrin®)	oxaprozin (Daypro®)	fenoprofen (Nalfon®)
~~**ketoprofen (Orudis®)**~~	piroxicam (Feldene®)	ibuprofen (Caldolor®) inj
meloxicam (Mobic®)	tolmetin (Tolectin®)	ibuprofen/famotidine (Duexis®)
nabumetone (Relafen®)		indomethacin (Indocin®) susp & ER caps
naproxen* (Naprosyn®)		indomethacin (Tivorbex®)

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)		
Tier-1	**Tier-2**	**Special PA**
naproxen EC (Naprosyn®)		**ketoprofen (Orudis®) caps**
sulindac (Clinoril®)		ketoprofen ER (Oruvail®)
		ketorolac tromethamine (Sprix®) nasal spray
		meclofenamate (Meclomen®)
		mefenamic acid (Ponstel®)
		meloxicam (Anjeso®) inj
		meloxicam (Vivlodex®) caps
		meloxicam ODT (Qmiiz ODT™)
		nabumetone 1,000mg (Relafen DS®)
		naproxen sodium ER (Naprelan®)
		naproxen/esomeprazole (Vimovo®)

caps = capsules; ER = extended-release; EC = enteric-coated; inj = injection; ODT = orally disintegrating tablet; PA = prior authorization; susp = suspension; tabs = tablets
Tier structure based on supplemental rebate participation and/or National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
*Naproxen oral suspension is available without prior authorization for members 12 years of age and younger. Members older than 12 years of age will require a reason why a special formulation product is needed in place of the regular tablet formulation.

Recommendation 4: Vote to Prior Authorize Oxlumo™ (Lumasiran)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the prior authorization of Oxlumo™ (lumasiran) with the following criteria (items shown in red are changes from what was presented at the February 2021 DUR Board meeting):

Oxlumo™ (Lumasiran) Approval Criteria:

1. An FDA approved indication for the treatment of primary hyperoxaluria type 1 (PH1) to lower urinary oxalate levels. Diagnosis of PH1 must be confirmed by:
   a. Molecular genetic testing identifying biallelic pathogenic variants in the *AGXT* gene; or
   b. Liver biopsy confirming alanine-glyoxylate aminotransferase (AGT) catalytic deficiency if the results of genetic testing are not diagnostic; and
2. Oxlumo™ must be prescribed by a nephrologist, geneticist, or other specialist with expertise in the treatment of PH1 (or an advanced care practitioner with a supervising physician who is a nephrologist, geneticist, or other specialist with expertise in the treatment of PH1); and

3. The prescriber must verify the member has an estimated glomerular filtration rate (eGFR) of ≥30mL/min/1.73m^2 prior to starting Oxlumo™ and must agree to monitor renal function regularly during treatment with Oxlumo™; and
4. The member must not have a history of ~~kidney or~~ liver transplant; and
5. The member must not have evidence of systemic oxalosis; and
6. The prescriber must verify that Oxlumo™ will be administered by a health care professional; and
7. The member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to the Oxlumo™ *Prescribing Information*; and
8. Initial approvals will be for the duration of 6 months. Further approval may be granted if the prescriber documents that the member is responding well to treatment as indicated by a reduction in urinary oxalate excretion.

Recommendation 5: Vote to Prior Authorize Fintepla® (Fenfluramine)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the prior authorization of Fintepla® (fenfluramine) with the following criteria shown in red:

Fintepla® (Fenfluramine) Approval Criteria:

1. An FDA approved indication for the treatment of seizures associated with Dravet syndrome; and
2. Member must be 2 years of age or older; and
3. Initial prescription must be written by, or in consultation with, a neurologist; and
4. Member must not be taking monoamine oxidase inhibitors (MAOIs) within 14 days of administration of Fintepla®; and
5. Prescriber must verify the member's blood pressure will be monitored; and
6. Member must not be actively suicidal or have uncontrolled depression and prescriber must verify member will be monitored for depression prior to starting Fintepla® therapy and throughout treatment; and
7. Member must have failed or be inadequately controlled with at least 2 other anticonvulsants; and
8. Pharmacy and prescriber must be certified in the Fintepla® Risk Evaluation and Mitigation Strategy (REMS) program; and
9. Member must be enrolled in the Fintepla® REMS program; and
10. Member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to package labeling; and

11. Prescriber must verify that dose titration and maximum maintenance dose will be followed according to package labeling based on member weight and concomitant medications; and
12. Initial approvals will be for the duration of 3 months. For continuation, the prescriber must include information regarding improved response/effectiveness of the medication; and
13. A quantity limit of 360mL per 30 days will apply.

Additionally, the College of Pharmacy recommends updating the current approval criteria for Epidiolex® (cannabidiol) based on the new FDA approved indication (changes noted in red):

Epidiolex® (Cannabidiol Oral Solution) Approval Criteria:

1. An FDA approved diagnosis of 1 of the following:
   a. Lennox-Gastaut syndrome (LGS); or
   b. Dravet syndrome; or
   c. Tuberous sclerosis complex (TSC)-associated seizures; and
2. Member must be 1 year of age or older; and
3. Initial prescription must be written by, or in consultation with, a neurologist; and
4. For a diagnosis of Dravet syndrome, the member must have failed therapy or be inadequately controlled with at least 1 anticonvulsant; or
5. For a diagnosis of LGS or TSC-associated seizures, the member must have failed therapy with at least 2* other anticonvulsants (*The manufacturer of Epidiolex® has currently provided a supplemental rebate to require a trial with 2 other anticonvulsant therapies; however, Epidiolex® will follow the original criteria and require trials with 3 other anticonvulsant therapies if the manufacturer chooses not to participate in supplemental rebates.); and
6. Members currently stable on Epidiolex® and who have a seizure diagnosis will be grandfathered; and
7. Member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to package labeling; and
8. Initial approvals will be for the duration of 3 months. For continuation, the prescriber must include information regarding improved response/effectiveness of the medication.

Recommendation 6: Vote to Prior Authorize Teriparatide

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the prior authorization of teriparatide injection into the Special Prior Authorization (PA) Tier of the Osteoporosis Medications Product Based Prior Authorization (PBPA) category with the following criteria (changes and additions noted in red):

Forteo® (Teriparatide) and Teriparatide Approval Criteria:

1. An FDA approved indication of 1 of the following:
   a. Treatment of postmenopausal women with osteoporosis at high risk for fracture; or
   b. To increase bone mass in men with primary or hypogonadal osteoporosis at high risk for fracture; or
   c. Treatment of men and women with osteoporosis associated with sustained systemic corticosteroid therapy at high risk for fracture; or
   d. Treatment of non-healing fracture (this indication only pertains to Forteo®); and
2. A minimum 12-month trial with a bisphosphonate plus adequate calcium and vitamin D or a patient-specific, clinically significant reason why the member cannot use a bisphosphonate must be provided; and
3. Use of teriparatide will require a patient-specific, clinically significant reason why the member cannot use Forteo® (teriparatide); and
4. The diagnosis of non-healing fracture may be approved for 6 months; and
5. Treatment duration, including other parathyroid hormone analogs, has not exceeded a total of 24 months during the patient's lifetime; and
6. Approval will be for a maximum of 2 years of parathyroid hormone analog therapy.

Osteoporosis Medications*		
Tier-1	**Tier-2**	**Special PA**
alendronate tabs (Fosamax®)	alendronate + vitamin D tabs (Fosamax® + D)	abaloparatide inj (Tymlos®)
calcium + vitamin D†	risedronate tabs (Actonel®)	alendronate effervescent tabs (Binosto®)
ibandronate tabs (Boniva®)		alendronate soln (Fosamax®)
zoledronic acid inj (Reclast®)		alendronate 40mg tabs (Fosamax®)
		denosumab inj (Prolia®)
		ibandronate inj (Boniva® IV)
		risedronate 30mg tabs (Actonel®)
		risedronate DR tabs (Atelvia®)
		romosozumab-aqqg (Evenity®)
		teriparatide inj (Forteo®)
		teriparatide inj

tabs = tablets; inj = injection; soln = solution; DR = delayed-release; PA = prior authorization
*Tier structure based on supplemental rebate participation and/or National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
†OTC calcium and vitamin D must be used at recommended doses in conjunction with Tier-1 bisphosphonates for trial to be accepted unless member has a recent laboratory result showing adequate vitamin D or member is unable to tolerate calcium. OTC calcium and vitamin D are only covered for members with osteoporosis that are being treated with a bisphosphonate.

Recommendation 7: Vote to Prior Authorize Zokinvy™ (Lonafarnib)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the prior authorization of Zokinvy™ (lonafarnib) with the following criteria:

Zokinvy™ (Lonafarnib) Approval Criteria:

1. An FDA approved indication of 1 of the following:
    a. To reduce the risk of mortality in Hutchinson-Gilford Progeria Syndrome (HGPS); or
    b. Treatment of processing-deficient Progeroid Laminopathies (PL) with either:
        i. Heterozygous *LMNA* mutation with progerin-like protein accumulation; or
        ii. Homozygous or compound heterozygous *ZMPSTE24* mutations; and
2. Member must have confirmatory mutational analysis showing mutation in the *LMNA* gene; and
3. Zokinvy™ will not be approved for other progeroid syndromes or processing-proficient PL (based upon its mechanism of action, Zokinvy™ would not be effective in these populations); and
4. Member must be 1 year of age or older; and
5. Member must have a body surface area (BSA) ≥0.39m^2; and
6. Member must have clinical signs of progeria (e.g., characteristic facial features, growth deficiency, atherosclerosis); and
7. Zokinvy™ must be prescribed by, or in consultation with, a specialist with expertise in treating HGPS or PL (or an advanced care practitioner with a supervising physician who is a specialist in treating HGPS or PL); and
8. Member must not be taking any of the following medications: strong/moderate CYP3A inhibitors, CYP2C9 inhibitors, midazolam, lovastatin, simvastatin, atorvastatin, or loperamide if younger than 2 years of age; and
9. Prior to and during treatment, the potential for drug interactions should be considered, concomitant medications reviewed, and members should be monitored for adverse reactions; and
10. Member should have ophthalmological evaluations performed at regular intervals and at the onset of any new visual changes; and
11. Prescriber must verify the member will be monitored for changes in electrolytes, complete blood counts, renal function, and liver enzymes; and
12. Member's recent BSA must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to the package labeling; and

13. The maximum approvable dose of Zokinvy™ is 300mg/m^2 per day; and
14. Initial approvals will be for 6 months. After 6 months of utilization, compliance and information regarding efficacy, such as a positive response to treatment including no new or worsening heart failure and no stroke incidence, will be required for continued approval. Subsequent approvals will be for 12 months and compliance and documentation of a positive response to Zokinvy™ therapy will be required on each continuation request.

Recommendation 8: Vote to Prior Authorize Nurtec™ ODT (Rimegepant) and Vyepti® (Eptinezumab-jjmr)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the placement of Nurtec™ ODT (rimegepant) into the Special Prior Authorization (PA) Tier of the Anti-Migraine Product Based Prior Authorization (PBPA) category with the following criteria and recommends updating the Reyvow® (lasmiditan) and Ubrelvy® (ubrogepant) criteria based on net cost and to clarify the use of concomitant medications based on clinical studies (proposed additions and changes are shown in red in the following criteria and Tier chart):

Anti-Migraine Medications Special Prior Authorization (PA) Approval Criteria:

1. Use of any non-oral sumatriptan formulation will require a patient-specific, clinically significant reason why the member cannot use the oral tablet formulation or lower-tiered triptan medications.
2. Use of Zembrace® SymTouch® or Tosymra® will require a patient-specific, clinically significant reason why the member cannot use all available generic formulations of sumatriptan (tablets, nasal spray, and injection) or lower-tiered triptan medications.
3. Use of dihydroergotamine injection (D.H.E. 45®) will require a patient-specific, clinically significant reason why the member cannot use lower-tiered triptan medications.
4. Use of dihydroergotamine nasal spray (Migranal®) will require a patient-specific, clinically significant reason why the member cannot use lower-tiered triptan medications or dihydroergotamine injection (D.H.E. 45®).
5. Use of Ergomar® (ergotamine sublingual tablets) will require a patient-specific, clinically significant reason why the member cannot use lower-tiered triptan medications; and
    a. Member must not have any of the contraindications for use of Ergomar® (e.g., coadministration with a potent CYP3A4 inhibitor, women who are or may become pregnant, peripheral vascular disease, coronary heart disease, hypertension, impaired hepatic or renal function, sepsis, hypersensitivity to any of the components); and

b. A quantity limit of 20 tablets per 28 days will apply.

6. Use of generic eletriptan will require a patient-specific, clinically significant reason why the member cannot use the brand formulation of Relpax® (brand formulation is preferred).
7. For use of Nurtec™ ODT (rimegepant), member must have failed therapy with at least 2* triptan medications or a patient-specific, clinically significant reason why a triptan is not appropriate for the member must be provided; and
   a. Nurtec™ ODT will not be approved for concurrent use with a prophylactic calcitonin gene-related peptide (CGRP) inhibitor.

   (*The manufacturer of Nurtec™ ODT has currently provided a supplemental rebate to require a trial with 2 triptan medications and to be the preferred CGRP product for acute treatment over Reyvow® and Ubrelvy®; however, Nurtec™ ODT will follow the same criteria as Reyvow® and Ubrelvy® if the manufacturer chooses not to participate in supplemental rebates.)
8. Use of Reyvow® (lasmiditan) or Ubrelvy® (ubrogepant) will require a patient-specific, clinically significant reason why the member cannot use triptan medications and Nurtec™ ODT (rimegepant); and
   a. Reyvow® and Ubrelvy® will not be approved for concurrent use with a prophylactic calcitonin gene-related peptide (CGRP) inhibitor.

Anti-Migraine Medications			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
Relpax® brand name only (eletriptan)	naratriptan (Amerge®)	almotriptan (Axert®)	dihydroergotamine injection (D.H.E. 45®)
rizatriptan (Maxalt®, Maxalt MLT®)	zolmitriptan (Zomig®, Zomig-ZMT®, Zomig® nasal spray)	frovatriptan (Frova®)	dihydroergotamine nasal spray (Migranal®)
sumatriptan (Imitrex®)			eletriptan (generic Relpax®)
sumatriptan/naproxen (Treximet®)			ergotamine sublingual tablet (Ergomar®)
			lasmiditan tablet (Reyvow®)
			rimegepant (Nurtec™ ODT)
			sumatriptan injection (Imitrex®)
			sumatriptan injection (Zembrace® SymTouch®)

Anti-Migraine Medications			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
			sumatriptan nasal powder (Onzetra® Xsail®)
			sumatriptan nasal spray (Imitrex®)
			sumatriptan nasal spray (Tosymra®)
			ubrogepant tablet (Ubrelvy®)

Tier structure based on supplemental rebate participation and/or National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
PA = prior authorization

Additionally, the College of Pharmacy recommends the prior authorization of Vyepti® (eptinezumab-jjmr), updating the Ajovy® (fremanezumab-vfrm) criteria based on net cost, and updating the calcitonin gene-related peptide (CGRP) prophylactic treatment criteria to be consistent with treatment guidelines with the following criteria (additions and changes are shown in red):

Aimovig® (Erenumab-aooe) and ~~Ajovy® (Fremanezumab-vfrm)~~ Vyepti® (Eptinezumab-jjmr) Approval Criteria:

1. An FDA approved indication for the preventive treatment of migraine in adults; and
2. Member must be 18 years of age or older; and
3. Member has documented chronic migraine or episodic migraine headaches:
    a. Chronic migraine: 15 or more headache days per month with 8 or more migraine days per month; or
    b. Episodic migraine: 4 to 14 migraine days per month on average for the past 3 months; and
        i. For episodic migraine, member must have had a history of migraines for a duration of 12 months or longer; and
4. Non-migraine medical conditions known to cause headache have been ruled out and/or have been treated. This includes, but is not limited to:
    a. Increased intracranial pressure (e.g., tumor, pseudotumor cerebri, central venous thrombosis); or
    b. Decreased intracranial pressure (e.g., post-lumbar puncture headache, dural tear after trauma); and
5. Migraine headache exacerbation secondary to other medication therapies or conditions have been ruled out and/or treated. This includes, but is not limited to:
    a. Hormone replacement therapy or hormone-based contraceptives; and
    b. Chronic insomnia; and
    c. Obstructive sleep apnea; and

6. The member has failed medical migraine preventive therapy with at least 3 agents with different mechanisms of action. Trials must be at least 8 weeks in duration (or documented adverse effects) within the last 365 days. This includes, but is not limited to:
    a. Select antihypertensive therapy (e.g., beta-blocker therapy); or
    b. Select anticonvulsant therapy; or
    c. Select antidepressant therapy [e.g., tricyclic antidepressants (TCA), serotonin and norepinephrine reuptake inhibitors (SNRI)]; and
7. Member is not frequently taking medications that are known to cause medication overuse headaches (MOH or rebound headaches) in the absence of intractable conditions known to cause chronic pain. MOH are a frequent cause of chronic headaches. A list of prescription or non-prescription medications known to cause MOH includes, but is not limited to:
    a. Decongestants (alone or in combination products) (≥10 days/month for >3 months); and
    b. Combination analgesics containing caffeine and/or butalbital (≥10 days/month for >3 months); and
    c. Opioids (≥10 days/month for >3 months); and
    d. Analgesic medications including acetaminophen or non-steroidal anti-inflammatory drugs (NSAIDs) (≥15 days/month for >3 months); and
    e. Ergotamine-containing medications (≥10 days/month for >3 months); and
    f. Triptans (≥10 days/month for >3 months); and
8. Member is not taking any medications that are likely to be the cause of the headaches; and
9. Member must have been evaluated within the last 6 months by a neurologist for migraine headaches and the requested medication (e.g., Aimovig®, Vyepti®) recommended as treatment (not necessarily prescribed by a neurologist); and
10. Member will not use requested medication concurrently with botulinum toxin for the prevention of migraine or with an alternative calcitonin gene-related peptide (CGRP) inhibitor; and
11. Other aggravating factors that are contributing to the development of episodic/chronic migraine headaches are being treated when applicable (e.g., smoking); and
12. For Aimovig®, prescriber must verify that member has been counseled on appropriate use, storage of the medication, and administration technique; and
13. For Vyepti®, prescriber must verify the medication will be prepared and administered according the Vyepti® *Prescribing Information*; and
14. A patient-specific, clinically significant reason why member cannot use Ajovy® (fremanezumab-vfrm) or Emgality® (galcanezumab-gnlm) must be provided; and

15. For consideration of Vyepti® at the maximum recommended dosing (300mg every 3 months), a patient-specific, clinically significant reason why other available CGRP inhibitors for migraine prophylaxis are not appropriate for the member must be provided; and
16. Initial approvals will be for the duration of 3 months. Compliance and information regarding efficacy, such as a reduction in monthly migraine days, will be required for continued approval. Continuation approvals will be granted for the duration of 1 year; and
17. Quantity limits will apply based on FDA-approved dosing:
    a. For Aimovig®, a quantity limit of 1 syringe or autoinjector per 30 days will apply; and
    ~~b. For Ajovy®, a quantity limit of 1 syringe per 30 days will apply. Requests for quarterly dosing (675mg every 3 months) will be approved for a quantity limit override upon meeting Ajovy® approval criteria; and~~
    c. For Vyepti®, a quantity limit of 3 vials per 90 days will apply.

Ajovy® (Fremanezumab-vfrm) and Emgality® (Galcanezumab-gnlm) Approval Criteria [Migraine Diagnosis]:*

1. An FDA approved indication for the preventive treatment of migraine in adults; and
2. Member must be 18 years of age or older; and
3. Member has documented chronic migraine or episodic migraine headaches:
    a. Chronic migraine: 15 or more headache days per month with 8 or more migraine days per month; or
    b. Episodic migraine: 4 to 14 migraine days per month on average for the past 3 months; and
        i. For episodic migraine, member must have had a history of migraines for a duration of 12 months or longer; and
4. Non-migraine medical conditions known to cause headache have been ruled out and/or have been treated. This includes, but is not limited to:
    a. Increased intracranial pressure (e.g., tumor, pseudotumor cerebri, central venous thrombosis); or
    b. Decreased intracranial pressure (e.g., post-lumbar puncture headache, dural tear after trauma); and
5. Migraine headache exacerbation secondary to other medication therapies or conditions have been ruled out and/or treated. This includes, but is not limited to:
    a. Hormone replacement therapy or hormone-based contraceptives; and
    b. Chronic insomnia; and
    c. Obstructive sleep apnea; and
6. The member has failed medical migraine preventive therapy with at least 2¥ agents with different mechanisms of action. Trials must be at least 8 weeks in duration (or documented adverse effects) within the

last 365 days. (¥The manufacturers of Ajovy® and Emgality® have currently provided a supplemental rebate to require a trial with 2 other migraine preventative therapies; however, Ajovy® and Emgality® will follow the original criteria and require trials with 3 other migraine preventative therapies if the manufacturers choose not to participate in supplemental rebates.) This includes, but is not limited to:
    a. Select antihypertensive therapy (e.g., beta-blocker therapy); or
    b. Select anticonvulsant therapy; or
    c. Select antidepressant therapy [e.g., tricyclic antidepressants (TCA), serotonin and norepinephrine reuptake inhibitors (SNRI)]; and
7. Member is not frequently taking medications that are known to cause medication overuse headaches (MOH or rebound headaches) in the absence of intractable conditions known to cause chronic pain. MOH are a frequent cause of chronic headaches. A list of prescription or non-prescription medications known to cause MOH includes, but is not limited to:
    a. Decongestants (alone or in combination products) (≥10 days/month for >3 months); and
    b. Combination analgesics containing caffeine and/or butalbital (≥10 days/month for >3 months); and
    c. Opioids (≥10 days/month for >3 months); and
    d. Analgesic medications including acetaminophen or non-steroidal anti-inflammatory drugs (NSAIDs) (≥15 days/month for >3 months); and
    e. Ergotamine-containing medications (≥10 days/month for >3 months); and
    f. Triptans (≥10 days/month for >3 months); and
8. Member is not taking any medications that are likely to be the cause of the headaches; and
9. Medication must be prescribed by or in consultation with a neurologist; and
10. Member will not use requested medication concurrently with botulinum toxin for the prevention of migraine or with an alternative calcitonin gene-related peptide (CGRP) inhibitor; and
11. Other aggravating factors that are contributing to the development of episodic/chronic migraine headaches are being treated when applicable (e.g., smoking); and
12. Prescriber must verify member has been counseled on appropriate use, storage of the medication, and administration technique; and
13. Initial approvals will be for the duration of 3 months. Compliance and information regarding efficacy, such as a reduction in monthly migraine days, will be required for continued approval. Continuation approvals will be granted for the duration of 1 year; and
14. Quantity limits will apply based on FDA-approved dosing:
    a. For Ajovy® prefilled syringe and autoinjector, a quantity limit of 1 syringe or 1 autoinjector per 30 days will apply. Requests for

quarterly dosing (675mg every 3 months) will be approved for a quantity limit override upon meeting Ajovy® approval criteria; and

b. For Emgality®, a quantity limit of 1 syringe or pen per 30 days will apply. Requests for an initial loading dose (240mg administered as 2 consecutive 120mg injections) will be approved for a quantity limit override upon meeting Emgality® approval criteria.

**The manufacturers of Ajovy® and Emgality® have provided a supplemental rebate to be the preferred calcitonin gene-related peptide (CGRP) inhibitor(s); however, Ajovy® and Emgality® will follow the original criteria similar to the other CGRP inhibitors if the manufacturers chooses not to participate in supplemental rebates.*

Recommendation 9: Vote to Prior Authorize Inqovi® (Decitabine/Cedazuridine), Onureg® (Azacitidine), and Riabni™ (Rituximab-arrx)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends the prior authorization of Inqovi® (decitabine/cedazuridine), Onureg® (azacitidine), and Riabni™ (rituximab-arrx) with the following criteria (shown in red):

Inqovi® (Decitabine/Cedazuridine) Approval Criteria [Myelodysplastic Syndromes (MDS) Diagnosis]:

1. Diagnosis of MDS (intermediate-1, intermediate-2, or high risk) in adults including previously treated and untreated, de novo, and secondary MDS with the following subtypes:
   a. Refractory anemia; or
   b. Refractory anemia with ring sideroblasts; or
   c. Refractory anemia with excess blasts; or
   d. Chronic myelomonocytic leukemia (CMML).

Onureg® (Azacitidine) Approval Criteria [Acute Myeloid Leukemia (AML) Diagnosis]:

1. Diagnosis of AML; and
2. Used as maintenance therapy in members who have achieved first complete remission (CR) or complete remission with incomplete blood count recovery (CRi) following intensive induction chemotherapy; and
3. Member is unable to complete intensive curative therapy.

Riabni™ (Rituximab-arrx) Approval Criteria:

1. An FDA approved diagnosis; and
2. A patient-specific, clinically significant reason why the member cannot use Rituxan® (rituximab) must be provided.

Additionally, the College of Pharmacy recommends updating the prior authorization criteria for Iclusig® (ponatinib) based on the recent FDA approval; changes noted in red:

Iclusig® (Ponatinib) Approval Criteria [Chronic Myeloid Leukemia (CML) Diagnosis]:

1. Member must have 1 of the following:
    a. T315I mutation; or
    b. Intolerant or resistant to ~~all other~~ 2 or more tyrosine kinase inhibitors (TKIs); or
    c. Post-hematopoietic stem cell transplantation in members with prior accelerated or blast phase prior to transplant or who have relapsed.

Finally, the College of Pharmacy recommends updating the prior authorization criteria for Venclexta® (venetoclax) based on NCCN compendia approval; changes and new criteria noted in red (only criteria with updates are listed):

Venclexta® (Venetoclax) Approval Criteria [Acute Myeloid Leukemia (AML) Diagnosis]:

1. Member meets 1 of the following:
    a. Member must be 75 years of age or older; or
    b. If the member is younger than 75 years of age, they must be unable to tolerate intensive induction chemotherapy; and
2. ~~Must be used~~ As first-line therapy or in relapsed/refractory disease; and
3. Must be used in combination with azacitidine, or decitabine, or low-dose cytarabine (LDAC).

Recommendation 10: Annual Review of Qutenza® (Capsaicin 8% Patch)

MOTION CARRIED by unanimous approval.

The College of Pharmacy recommends updating the approval criteria for Qutenza® (capsaicin 8% patch) based on the new FDA approved indication, with the following changes shown in red:

Qutenza® (Capsaicin 8% Patch) Approval Criteria:

1. An FDA approved diagnosis of postherpetic neuralgia or diabetic peripheral neuropathy of the feet; and
2. Documented treatment attempts at recommended dosing or contraindication(s) to at least 1 agent from each of the following drug classes:
    a. For postherpetic neuralgia:
        i. Tricyclic antidepressants; and
        ii. Anticonvulsants; and

iii. Topical lidocaine; or

b. For diabetic peripheral neuropathy of the feet:
   i. Duloxetine or tricyclic antidepressants; and
   ii. Anticonvulsants; and
   iii. Topical lidocaine; and

3. Qutenza® must be administered by a health care provider; and
4. For a diagnosis of diabetic peripheral neuropathy of the feet, the prescriber must verify that they will examine the feet to detect skin lesions related to underlying neuropathy or vascular insufficiency prior to application of Qutenza®; and
5. Initial approvals will be for 1 treatment (for the duration of 90 days). For continuation, the prescriber must include information regarding improved response/effectiveness of this medication; and
6. A quantity limit of no more than 4 patches per treatment every 90 days will apply.

Recommendation 11: Annual Review of Lymphoma Medications and 30-Day Notice to Prior Authorize Breyanzi® (Lisocabtagene Maraleucel), Monjuvi® (Tafasitamab-cxix), Romidepsin 27.5mg/5.5mL Vial, Tecartus™ (Brexucabtagene Autoleucel), and Ukoniq™ (Umbralisib)

NO ACTION REQUIRED.

Recommendation 12: Annual Review of Lutathera® (Lutetium Lu-177 Dotatate) and Vitrakvi® (Larotrectinib)

NO ACTION REQUIRED.

Recommendation 13: Annual Review of Hemophilia Medications and 30-Day Notice to Prior Authorize Sevenfact® [Coagulation Factor VIIa (Recombinant)-jncw]

NO ACTION REQUIRED.

Recommendation 14: Annual Review of Multiple Sclerosis Medications and 30-Day Notice to Prior Authorize Bafiertam™ (Monomethyl Fumarate), Kesimpta® (Ofatumumab), and Zeposia® (Ozanimod)

NO ACTION REQUIRED.

Recommendation 15: Annual Review of Hereditary Angioedema (HAE) Medications and 30-Day Notice to Prior Authorize Orladeyo™ (Berotralstat)

NO ACTION REQUIRED.

Recommendation 16: Annual Review of Granulocyte Colony-Stimulating Factors (G-CSFs) and 30-Day Notice to Prior Authorize Nyvepria™ (Pegfilgrastim-apgf)

NO ACTION REQUIRED.

Recommendation 17: Annual Review of Anti-Emetic Medications and 30-Day Notice to Prior Authorize Barhemsys® (Amisulpride)

NO ACTION REQUIRED.

Recommendation 18: Annual Review of Growth Hormone Products and 30-Day Notice to Prior Authorize Sogroya® (Somapacitan-beco)

NO ACTION REQUIRED.

Recommendation 19: U.S. Food and Drug Administration (FDA) and Drug Enforcement Administration (DEA) Updates

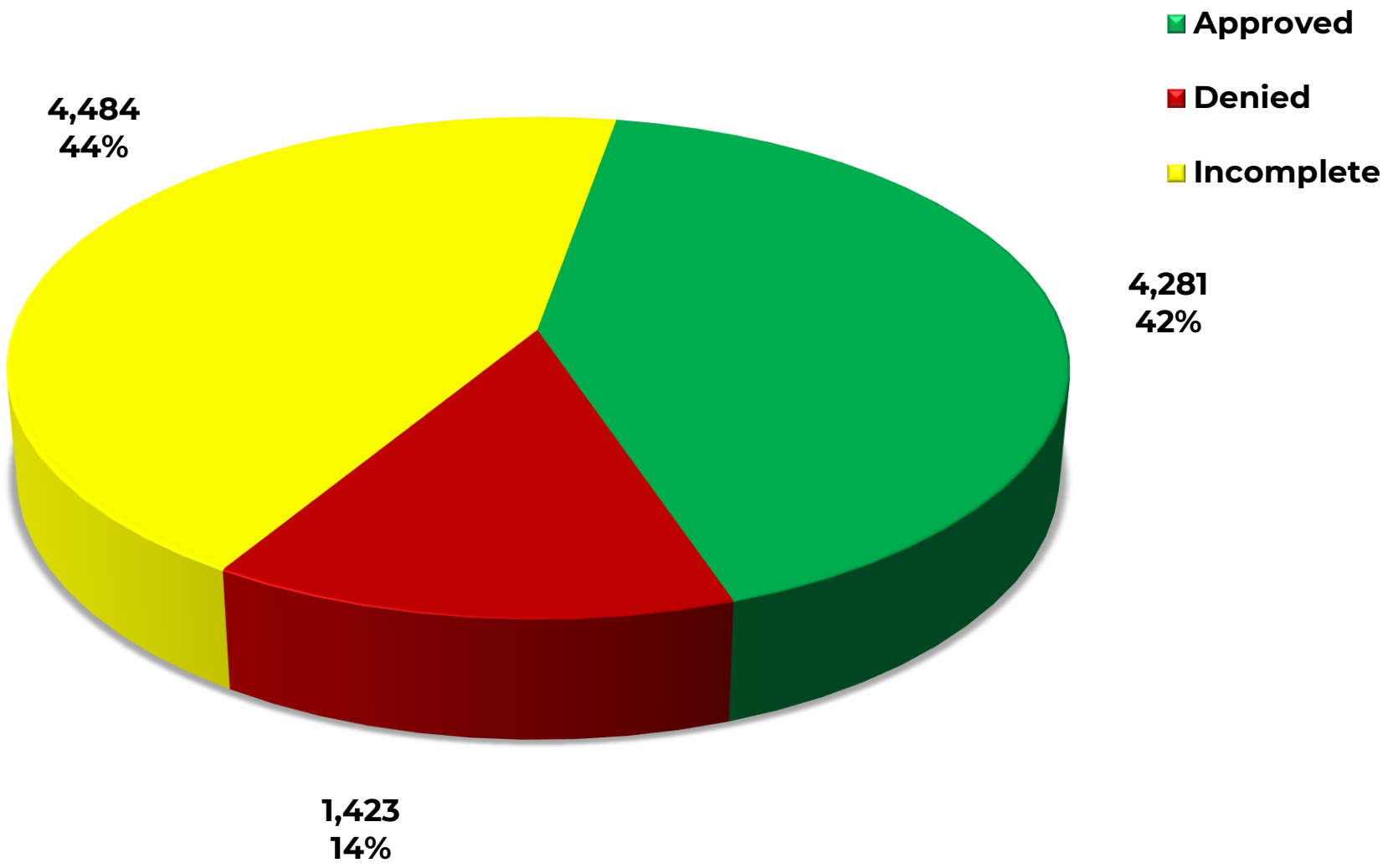
NO ACTION REQUIRED.

Recommendation 20: Future Business

NO ACTION REQUIRED.

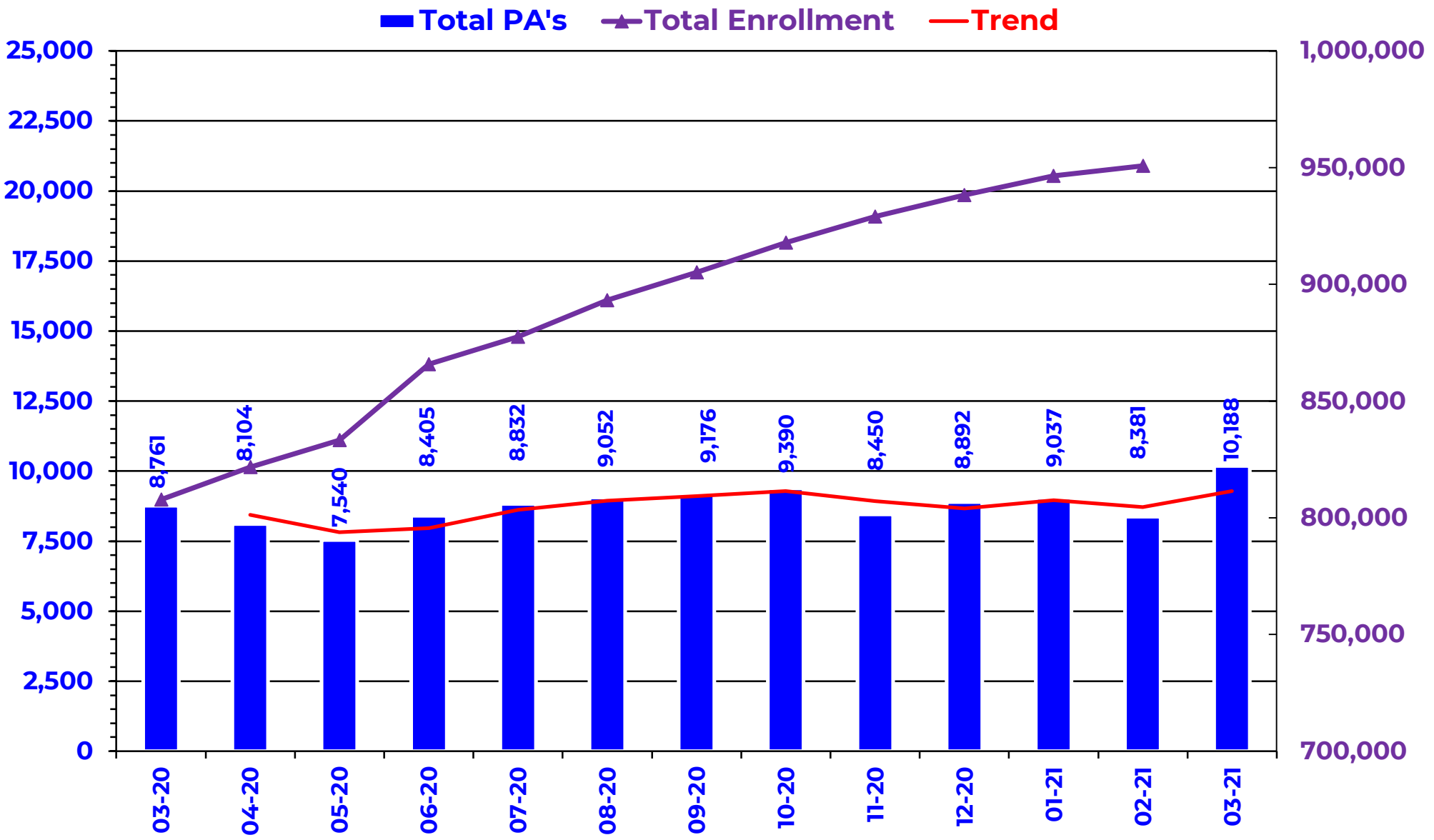
Appendix B

PRIOR AUTHORIZATION ACTIVITY REPORT: MARCH 2021



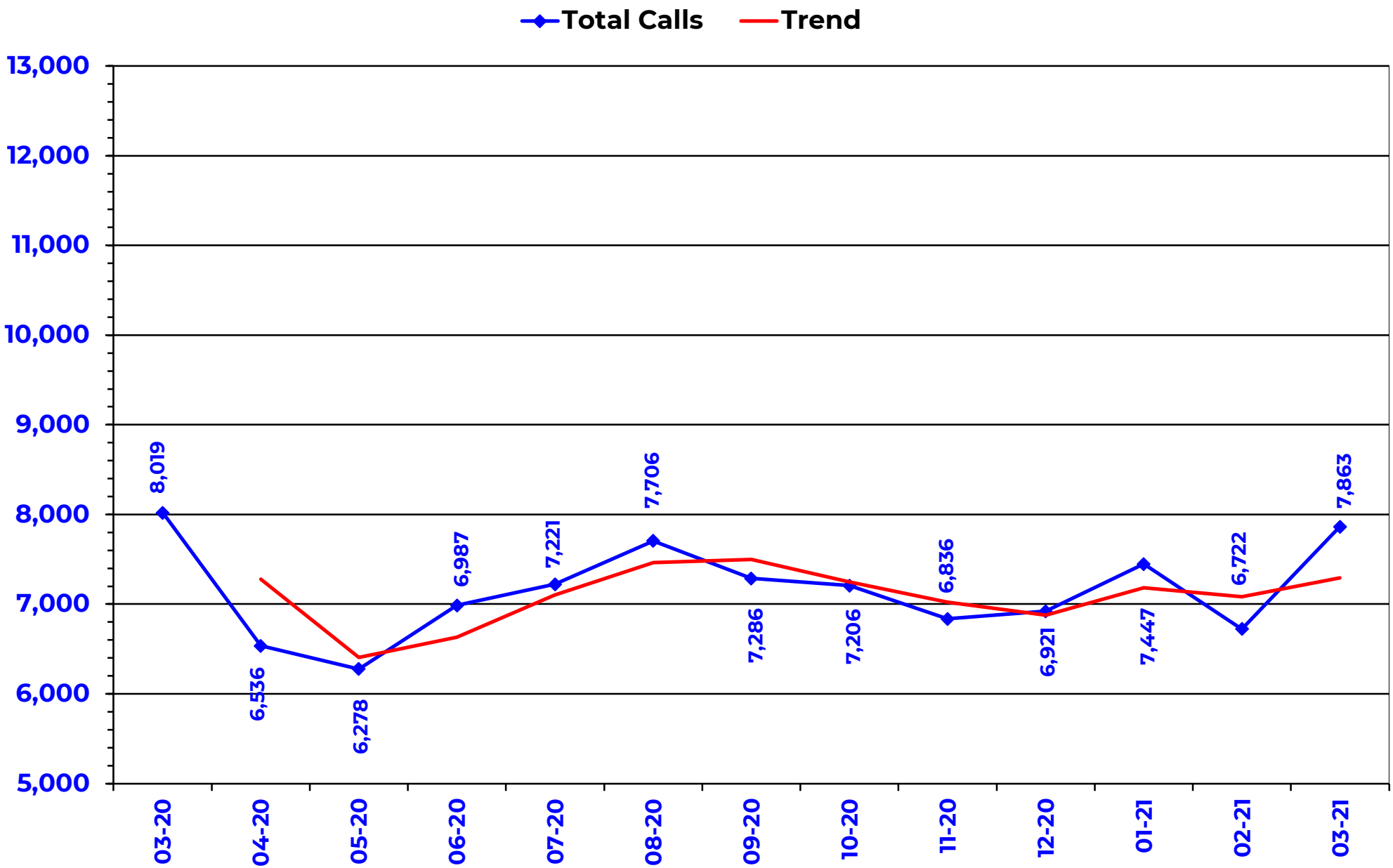
PA totals include approved/denied/incomplete/overrides

PRIOR AUTHORIZATION REPORT: MARCH 2020 – MARCH 2021



PA totals include approved/denied/incomplete/overrides

CALL VOLUME MONTHLY REPORT: MARCH 2020 – MARCH 2021



Prior Authorization Activity

3/1/2021 Through 3/31/2021

	Total	Approved	Denied	Incomplete	Average Length of Approvals in Days
Advair/Symbicort/Dulera	74	11	9	54	357
Analgesic, NonNarcotic	16	0	6	10	0
Analgesic, Narcotic	308	110	40	158	159
Angiotensin Receptor Antagonist	13	6	3	4	359
Antiasthma	51	15	9	27	256
Antibiotic	46	20	3	23	216
Anticonvulsant	198	82	13	103	310
Antidepressant	222	45	31	146	308
Antidiabetic	474	156	79	239	358
Antigout	16	3	3	10	358
Antihemophilic Factor	14	10	0	4	305
Antihistamine	52	8	12	32	329
Antimigraine	318	46	117	155	202
Antineoplastic	152	87	13	52	177
Antiulcers	70	9	15	46	173
Anxiolytic	22	1	2	19	3
Atypical Antipsychotics	316	131	37	148	342
Biologics	190	103	19	68	302
Bladder Control	49	6	16	27	358
Blood Thinners	362	192	22	148	334
Botox	62	43	11	8	318
Buprenorphine Medications	86	23	5	58	71
Calcium Channel Blockers	11	4	2	5	222
Cardiovascular	98	46	8	44	281
Chronic Obstructive Pulmonary Disease	218	40	54	124	336
Constipation/Diarrhea Medications	179	36	53	90	207
Contraceptive	44	13	10	21	359
Corticosteroid	10	0	3	7	0
Dermatological	389	99	101	189	166
Diabetic Supplies	897	447	109	341	214
Endocrine & Metabolic Drugs	109	56	5	48	211
Erythropoietin Stimulating Agents	10	6	0	4	84
Fibric Acid Derivatives	12	1	1	10	361
Fibromyalgia	14	0	5	9	0
Fish Oils	30	3	9	18	358
Gastrointestinal Agents	132	24	23	85	193
Genitourinary Agents	20	0	5	15	0
Glaucoma	25	4	5	16	128
Growth Hormones	134	84	10	40	147
Hematopoietic Agents	16	5	3	8	192
Hepatitis C	110	68	16	26	8
HFA Rescue Inhalers	12	2	2	8	245
Insomnia	59	3	13	43	137

* Includes any therapeutic category with less than 10 prior authorizations for the month.

	Total	Approved	Denied	Incomplete	Average Length of Approvals in Days
Insulin	195	62	28	105	342
Miscellaneous Antibiotics	19	3	3	13	20
Multiple Sclerosis	89	33	17	39	211
Muscle Relaxant	44	4	7	33	62
Nasal Allergy	92	8	24	60	91
Neurological Agents	81	32	17	32	211
Neuromuscular Agents	18	9	3	6	286
NSAIDs	37	1	11	25	358
Ocular Allergy	27	1	6	20	85
Ophthalmic	15	1	6	8	358
Ophthalmic Anti-infectives	15	4	0	11	9
Ophthalmic Corticosteroid	26	7	3	16	232
Osteoporosis	23	8	4	11	333
Other*	298	58	55	185	246
Otic Antibiotic	14	1	1	12	7
Pediculicide	23	4	1	18	13
Respiratory Agents	41	25	3	13	243
Statins	25	3	7	15	201
Stimulant	1,013	441	93	479	348
Synagis	37	19	3	15	22
Testosterone	70	30	15	25	303
Thyroid	34	24	5	5	358
Topical Antifungal	48	3	12	33	91
Topical Corticosteroids	84	2	59	23	55
Vitamin	97	22	48	27	133
Pharmacotherapy	67	61	0	6	271
Emergency PAs	1	1	0	0	
Total	8,173	2,915	1,333	3,925	

Overrides					
Brand	34	16	2	16	316
Compound	5	5	0	0	16
Diabetic Supplies	20	16	1	3	78
Dosage Change	353	331	2	20	12
High Dose	6	4	0	2	152
Ingredient Duplication	4	3	0	1	10
Lost/Broken Rx	111	94	7	10	18
MAT Override	258	173	3	82	68
NDC vs. Age	369	217	30	122	267
NDC vs. Sex	13	7	1	5	88
Nursing Home Issue	34	31	0	3	12
Opioid MME Limit	160	49	11	100	131
Opioid Quantity	29	27	0	2	156
Other*	50	43	2	5	13
Quantity vs. Days Supply	498	297	30	171	245

* Includes any therapeutic category with less than 10 prior authorizations for the month.

	Total	Approved	Denied	Incomplete	Average Length of Approvals in Days
STBS/STBSM	20	15	1	4	63
Stolen	5	5	0	0	15
Third Brand Request	44	33	0	11	16
Overrides Total	**2,015**	**1,366**	**90**	**559**	
Total Regular PAs + Overrides	**10,188**	**4,281**	**1,423**	**4,484**	

Denial Reasons	
Unable to verify required trials.	3,774
Does not meet established criteria.	1,456
Lack required information to process request.	668
Other PA Activity	
Duplicate Requests	1,004
Letters	19,351
No Process	8
Changes to Existing PAs	777
Helpdesk Initiated Prior Authorizations	722
PAs Missing Information	3

* Includes any therapeutic category with less than 10 prior authorizations for the month.

SoonerPsych Program Update

Oklahoma Health Care Authority
April 2021

Prescriber Mailing Summary

The SoonerPsych program is an educational quarterly mailing to prescribers treating members utilizing atypical antipsychotic medications. Each mailing includes a gauge showing prescribers how their practice compares to those of other SoonerCare prescribers of atypical antipsychotic medications regarding potential differences from evidence-based prescribing practices. Each mailing also includes an informational page with evidence-based material related to the mailing topics. Mailing topics are comprised of 4 modules: adherence, diagnosis, metabolic monitoring, and polypharmacy.

The SoonerPsych program has been using a "report card" format since April 2014. Beginning in April 2016, educational letters were sent to the same group of prescribers with all modules included in each mailing. The mailing list is updated approximately every 2 years, and included prescribers receive 4 letters per year to better inform them of their SoonerCare members taking atypical antipsychotic medications and to make it more convenient to track their patients and prescribing over time including any improvements or changes. Inclusion criteria requires the prescriber to have 5 or more SoonerCare members taking atypical antipsychotic medications. The mailing list was last updated in January 2020.

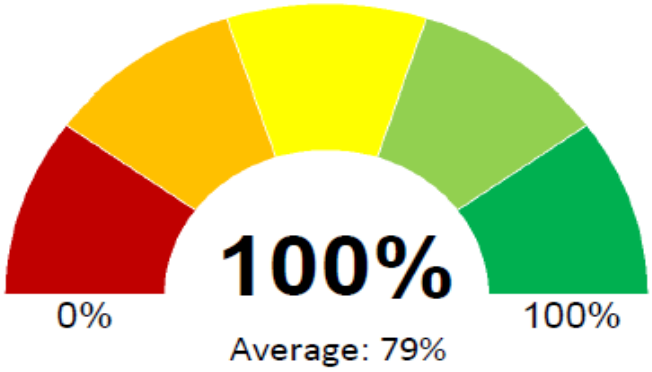
Effective January 2017, data collection was expanded from a previous research-based approach to include additional diagnosis fields and monitoring (lipids and glucose) fields in order to provide a more clinically meaningful percentage to send to prescribers. The following list outlines definitions for each module included in the revised SoonerPsych mailing:

- **Adherence:** Adherence is defined as members whose proportion of days covered (PDC) or adherence calculated from pharmacy claims history for atypical antipsychotic medications was ≥80%.
- **Diagnosis:** Diagnosis is defined as members whose recent 12-month medical claims history included a diagnosis with a strong indication for prescribing an atypical antipsychotic medication.
- **Metabolic Monitoring:** Metabolic monitoring is defined as members whose recent 12-month medical claims history included glucose testing. Metabolic monitoring also evaluates the recent 12-month medical claims history for lipid testing for members with a diagnosis of hyperlipidemia.

- **Polypharmacy:** Polypharmacy is defined as members whose pharmacy claims history indicated concurrent use of 2 or more atypical antipsychotic medications for >90 days.

Example Gauge

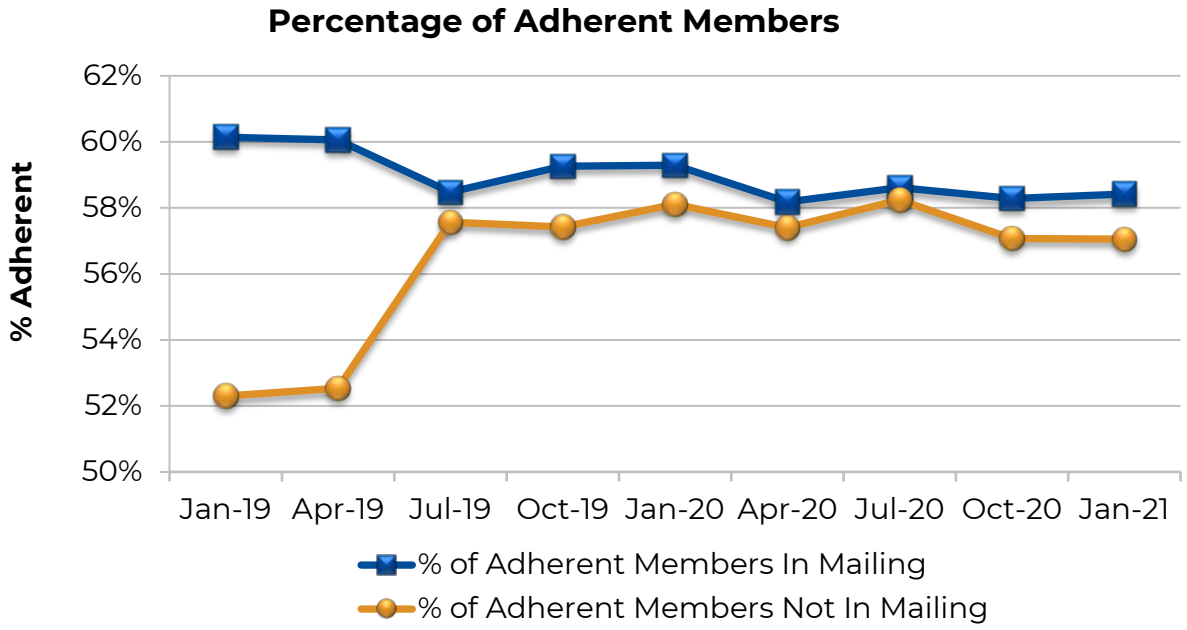
Each gauge includes the individual prescriber's performance in relation to the specific module as well as the average of other SoonerCare prescribers for comparison. The following is an example gauge included in the mailings.



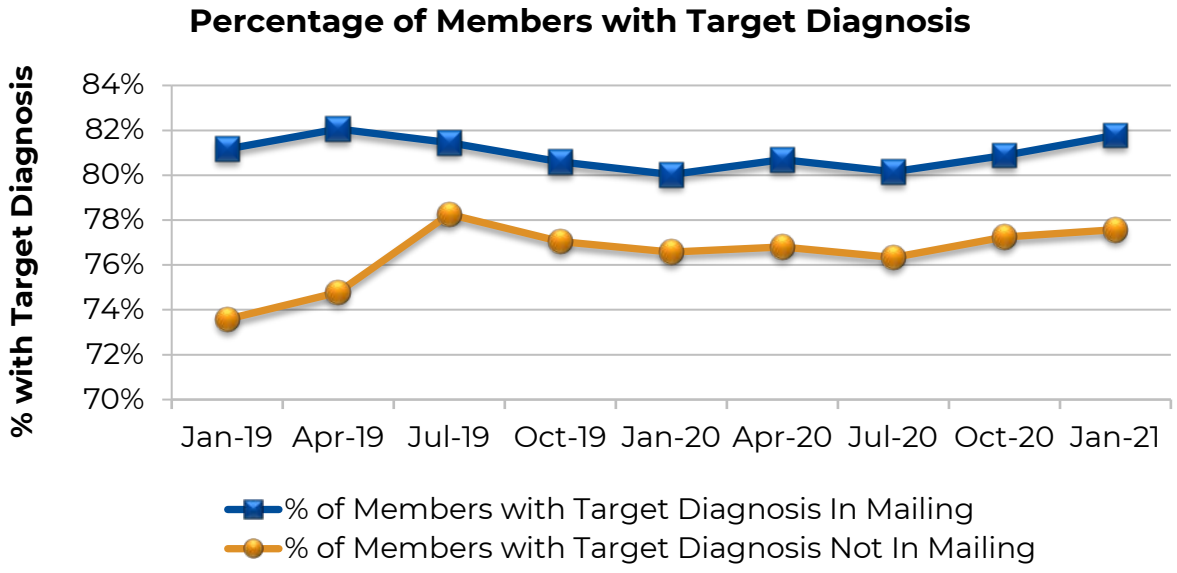
SoonerPsych Trends

The following graphs show the SoonerPsych trends for member adherence, diagnosis, metabolic monitoring, and polypharmacy from January 2019 to January 2021. Members whose prescribers were included in the SoonerPsych mailings are designated separately from those members whose prescribers were not included in the mailings. It is important to note that starting with the July 2019 mailing, the SoonerPsych data was adjusted for outliers, after input from the Drug Utilization Review (DUR) Board at the July 2019 DUR Board meeting, to show a more meaningful comparison of prescribers included in the mailing and prescribers not included in the mailing. Although SoonerPsych trends are tracked over time, it may be more meaningful to evaluate the mailings starting in January 2020 and going forward as a new data set since the prescriber mailing list was last updated in January 2020 to include a larger number of prescribers and prescribers who were not previously receiving a mailing.

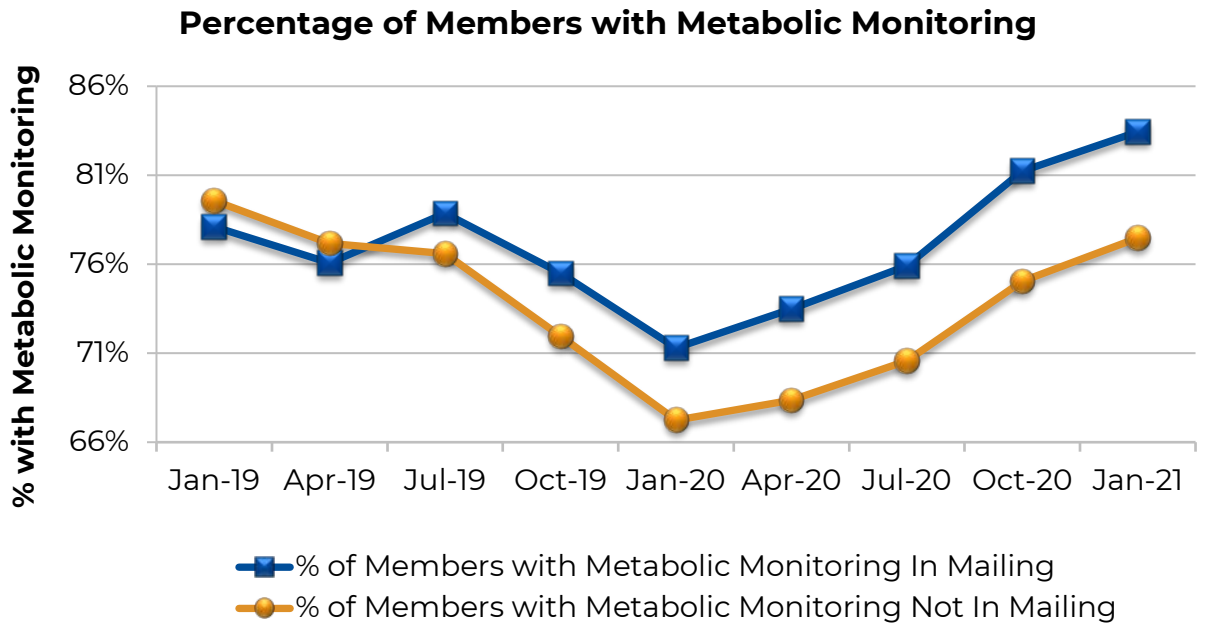
The following graph shows the SoonerPsych trends for the percentage of adherent members. Members are considered adherent if their PDC ≥80%. Please note, the vertical axis starts at 50% of members in order to reflect small changes.



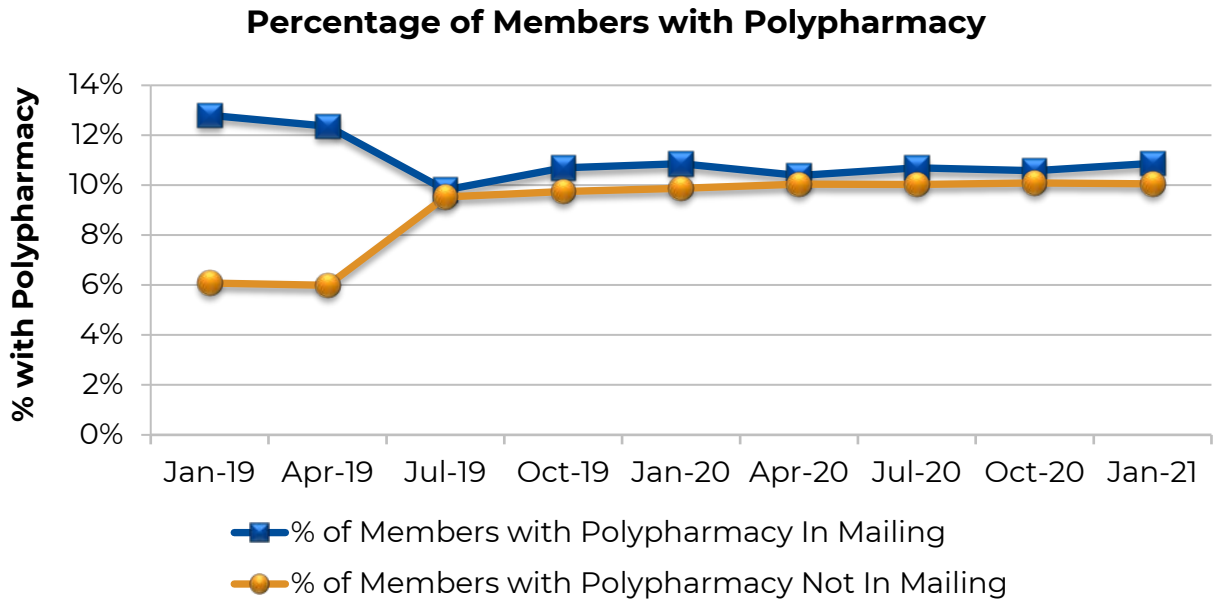
The following graph shows the SoonerPsych trends for the percentage of members whose recent 12-month medical claims history included a diagnosis with a strong indication for prescribing an antipsychotic medication. Please note, the vertical axis starts at 70% of members in order to reflect small changes.



The following graph shows the SoonerPsych trends for the percentage of members with appropriate metabolic monitoring while on an antipsychotic medication. Please note, the vertical axis starts at 66% of members in order to reflect small changes.



The following graph shows the SoonerPsych trends for the percentage of members with polypharmacy (concurrent use of 2 or more atypical antipsychotic medications for >90 days). Please note, unlike the previous graphs, the vertical axis starts at 0% of members as a lower percentage is a better outcome (indicates less prescribing of concomitant atypical antipsychotic medications).



Conclusions

Recent SoonerPsych trends comparing January 2019 through January 2021 indicate overall improvements in the percentage of adherent members, the percentage of members with a target diagnosis, and metabolic monitoring. The percentage of members with polypharmacy is similar for members whose prescribers received the SoonerPsych mailings compared to those not included in the mailings in 2019 and 2020. Polypharmacy previously did not show positive trends in 2019 for those prescribers included in the mailing; however, after adjusting the data for outliers starting in July 2019, the percentage of members with polypharmacy is similar for members whose prescribers received the mailings compared to those not included in the mailings. Continuing to adjust the data for outliers and following the results of the new prescriber list over time may provide more opportunities for additional prescriber-specific interventions. Overall, results indicate consistently receiving evidence-based educational mailings reminds prescribers of evidence-based practices and averts some potentially inappropriate prescribing. Recent changes to the mailing format (including all modules in each mailing, mailing to consistent prescribers, and updating the prescriber mailing list), as well as expanding the data collection process and adjusting the data for outliers, are intended to sustain improvements and reduce waning interventions. The College of Pharmacy will continue to work with the Oklahoma Health Care Authority to improve educational mailings with the goal of improving the quality of care for SoonerCare members utilizing atypical antipsychotic medications. Future results of the SoonerPsych educational mailing will be reviewed with the DUR Board as they become available.

Appendix C

Vote to Prior Authorize Bafiertam™ (Monomethyl Fumarate), Kesimpta® (Ofatumumab), and Zeposia® (Ozanimod)

Oklahoma Health Care Authority
April 2021

New U.S. Food and Drug Administration (FDA) Approval(s)[1,2,3,4,5,6,7]

- **Bafiertam™ (Monomethyl Fumarate):** In April 2020, the FDA approved Bafiertam™ (monomethyl fumarate) delayed release (DR) capsules for the treatment of relapsing forms of multiple sclerosis (RMS), including clinically isolated syndrome (CIS), relapsing-remitting multiple sclerosis (RRMS), and active secondary progressive multiple sclerosis (SPMS), in adults. The FDA granted approval of Bafiertam™ through the 505(b)(2) filing pathway. Bafiertam™, a bioequivalent alternative to a prodrug of Tecfidera® (dimethyl fumarate), met the required bioequivalence, safety, efficacy, and quality standards comparing oral Tecfidera® to Bafiertam™. Bafiertam™ is supplied as a 95mg DR capsule, and the recommended starting dose is 95mg twice daily for 7 days followed by the maintenance dose of 190mg [(2) 95mg capsules] twice daily thereafter. Assessments should be done prior to initiation of treatment with Bafiertam™ consisting of a complete blood count (CBC), including lymphocyte count, and liver function tests (LFTs). The annual cost of Bafiertam™, based on the Wholesale Acquisition Cost (WAC), is $69,480.00 for the maintenance dose of (2) 95mg capsules twice daily.
- **Kesimpta® (Ofatumumab):** In August 2020, the FDA approved Kesimpta® (ofatumumab) subcutaneous (sub-Q) injection for the treatment of RMS, to include CIS, RRMS, and active SPMS, in adults. Kesimpta® is a targeted, precisely dosed and delivered B-cell therapy that has demonstrated superiority versus teriflunomide (Aubagio®) in significantly reducing the annualized relapse rate [(ARR), the primary endpoint of Kesimpta®'s clinical study], 3-month confirmed disability progression (CDP), and the number of gadolinium-enhancing (Gd+) T1 and new or enlarging T2 lesions with a similar safety profile compared with teriflunomide. Traditionally B-cell treatments, which bind to and deplete B-cells associated with disease activity in multiple sclerosis (MS), have predominantly been available in hospitals or infusion treatment centers. Kesimpta® is the first B-cell therapy that can be self-administered once monthly at home via the Sensoready® autoinjector pen. Kesimpta® is supplied as a 20mg/0.4mL sub-Q injection in a prefilled Sensoready® Pen and as a 20mg/0.4mL single-dose prefilled

syringe. Kesimpta® should be stored in the original carton in the refrigerator between 36° and 46°F prior to use. Kesimpta® provides the flexibility of self-administering via once-monthly sub-Q dosing requiring no premedication and eliminates the need to travel to an infusion center. The recommended initial dosing of Kesimpta® is 20mg administered at week 0, 1, and 2. The recommended subsequent dosing of Kesimpta® is 20mg administered monthly starting at week 4. Ofatumumab (marketed as brand name Arzerra®) was first approved by the FDA in 2009 for the treatment of chronic lymphocytic leukemia (CLL) as an intravenous (IV) infusion for administration by a health care provider; the recommended dosing for the treatment of CLL is significantly higher than the RMS dose of ofatumumab, given as 1,000mg or 2,000mg per dose. The annual cost of Kesimpta®, based on WAC, for the maintenance dose of 20mg monthly is $83,000.04.

- **Zeposia® (Ozanimod):** In March 2020, the FDA approved Zeposia® (ozanimod) for the treatment of adults with RMS, including CIS, RRMS, and active SPMS. Zeposia® is supplied as 0.23mg, 0.46mg, and 0.92mg oral capsules and is the only approved sphingosine-1-phosphate (S1P) receptor modulator that offers RMS patients treatment initiation without the requirement of genetic testing or label-based first-dose observation requirement. A 7-day up-titration dosing schedule should be used to reach the maintenance dosage of 0.92mg once daily, as a transient decrease in heart rate (HR) and atrioventricular (AV) conduction delays may occur. The approval of Zeposia® is based on data in 2 randomized, double-blind, Avonex® (interferon beta-1a) active comparator-controlled studies in patients with RMS. In study 1 (N=895), the ARR was 0.181 and 0.350 for the Zeposia® and Avonex® groups, respectively (relative reduction: 48%; P<0.0001). In study 2 (N=874), the ARR was 0.172 and 0.276 for the Zeposia® and Avonex® groups, respectively (relative reduction: 38%; P<0.0001). There was no statistically significant difference in CDP between Zeposia® and Avonex® patients over 2 years. The annual cost of Zeposia®, based on WAC, is $88,639.20 for the maintenance dose of 0.92mg once daily.

Recommendations

The College of Pharmacy recommends the prior authorization of Bafiertam™ (monomethyl fumarate), Kesimpta® (ofatumumab), and Zeposia® (ozanimod) with the following criteria:

Bafiertam™ (Monomethyl Fumarate) Approval Criteria:

1. An FDA approved diagnosis of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing remitting disease, and active secondary progressive disease, in adults; and

2. Approvals will not be granted for concurrent use with other disease-modifying therapies; and
3. Verification from the prescriber that member has no serious active infection(s); and
4. Complete blood counts (CBC), including lymphocyte count, and verification that levels are acceptable to the prescriber; and
5. Serum aminotransferase, alkaline phosphatase, and total bilirubin levels and verification that levels are acceptable to the prescriber; and
6. Intolerable adverse effects associated with a trial of Tecfidera® (dimethyl fumarate) and Vumerity® (diroximel fumarate) that are not expected to occur with Bafiertam™ or a patient-specific, clinically significant reason why trials of Tecfidera® and Vumerity® are not appropriate for the member must be provided; and
7. Verification that CBC, including lymphocyte count, levels are acceptable to the prescriber in addition to compliance will be required for continued approval every 6 months; and
8. A quantity limit of 120 capsules per 30 days will apply.

Kesimpta® (Ofatumumab) Approval Criteria:

1. An FDA approved diagnosis of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease, in adults; and
2. Member must have had at least 1 relapse in the previous 12 months; and
3. The prescriber must verify hepatitis B virus (HBV) screening is performed before the first dose of Kesimpta® and the member does not have an active HBV infection; and
4. Prescriber must agree to monitor quantitative serum immunoglobulin level before, during, and after discontinuation of treatment with Kesimpta® until B-cell repletion; and
5. Prescriber must verify the member has no active infection(s); and
6. Prescriber must verify the first injection of Kesimpta® will be administered by a health care professional prepared to manage injection-related adverse reactions; and
7. Kesimpta® must be shipped via cold chain supply and the member or member's caregiver must be trained on the proper storage and subcutaneous (sub-Q) administration of Kesimpta®; and
8. Female members must not be pregnant and must have a negative pregnancy test prior to initiation of treatment with Kesimpta®; and
9. Female members of reproductive potential must use an effective method of contraception during treatment and for 6 months after discontinuing Kesimpta®; and
10. A quantity limit of 1 syringe or prefilled Sensoready® Pen per month will apply. Initial dosing titration will be approved for a quantity limit override upon meeting Kesimpta® approval criteria; and

11. Compliance will be checked for continued approval every 6 months.

Zeposia® (Ozanimod) Approval Criteria:

1. An FDA approved diagnosis of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease, in adults; and
2. Member must not have any contraindications for use of Zeposia® including:
    a. Experienced myocardial infarction (MI), unstable angina, stroke, transient ischemic attack (TIA), decompensated heart failure (HF) requiring hospitalization, or NYHA Class III/IV HF in the last 6 months; or
    b. Presence of Mobitz type II second-degree, third-degree atrioventricular (AV) block, or sick sinus syndrome, unless member has a functioning pacemaker; or
    c. Severe untreated sleep apnea; or
    d. Concurrent use of monoamine oxidase inhibitors (MAOIs); and
3. Member must not have received prior treatment with alemtuzumab; and
4. Member must not be concurrently using strong CYP2C8 inhibitors/inducers or breast cancer resistance protein (BCRP) inhibitors; and
5. Verification from the prescriber that member has no active infection(s); and
6. Complete blood counts (CBC) and verification that levels are acceptable to the prescriber; and
7. Prescriber must conduct an electrocardiogram (ECG) to determine whether preexisting conduction abnormalities are present before initiating Zeposia®; and
8. Liver function tests (LFTs) and verification that levels are acceptable to the prescriber; and
9. Ophthalmic evaluation and verification that member will be monitored for changes in vision throughout therapy; and
10. Verification from the prescriber that the member has been assessed for medications and conditions that cause reduction in heart rate or AV conduction delays and that the member will be followed with appropriate monitoring per package labeling; and
11. Verification from the prescriber that the member has been assessed for previous confirmed history of chickenpox or vaccination against varicella. Members without a history of chickenpox or varicella vaccination should receive a full course of the varicella vaccine prior to commencing treatment with Zeposia®; and
12. Female members of reproductive potential must not be pregnant and must have a negative pregnancy test prior to initiation of therapy; and

13. Female members of reproductive potential must be willing to use effective contraception during treatment with Zeposia® and for at least 3 months after discontinuing treatment; and
14. Member must have had an inadequate response to Gilenya® (fingolimod) or a patient-specific, clinically significant reason why fingolimod is not appropriate for the member must be provided; and
15. Compliance will be checked for continued approval every 6 months; and
16. A quantity limit of 30 capsules per 30 days will apply.

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[1] Banner Life Sciences, LLC. Bafiertam™ (Monomethyl Fumarate), the Bioequivalent Alternative to Biogen's Tecfidera® (Dimethyl Fumarate), is a New Oral Treatment Option for Relapsing Forms of Multiple Sclerosis. *Business Wire*. Available online at: https://www.biospace.com/article/releases/banner-life-sciences-announces-final-fda-approval-of-bafiertam-for-multiple-sclerosis/. Issued 04/30/2020. Last accessed 03/19/2021.
[2] Bafiertam™ Prescribing Information. Banner Life Sciences. Available online at: https://bafiertam.com/wp-content/uploads/2020/05/Bafiertam-Prescribing-Information-5-20-2020.pdf. Last revised 04/2020. Last accessed 03/19/2021.
[3] Novartis. FDA Approves Kesimpta® (Ofatumumab), the First and Only Self-Administered, Targeted B-Cell Therapy for Patients with Relapsing Multiple Sclerosis. *Global Newswire*. Available online at: https://www.globenewswire.com/news-release/2020/08/20/2081597/0/en/FDA-approves-Novartis-Kesimpta-ofatumumab-the-first-and-only-self-administered-targeted-B-cell-therapy-for-patients-with-relapsing-multiple-sclerosis.html. Issued 08/20/2020. Last accessed 03/19/2021.
[4] Kesimpta® Prescribing Information. Novartis Pharmaceuticals Corporation. Available online at: https://www.novartis.us/sites/www.novartis.us/files/kesimpta.pdf. Last revised 08/2020. Last accessed 03/19/2021.
[5] Bristol-Myers Squibb. United States Food and Drug Administration Approves Bristol Myers Squibb's Zeposia® (Ozanimod), a New Oral Treatment for Relapsing Forms of Multiple Sclerosis. *Business Wire*. Available online at: https://news.bms.com/news/corporate-financial/2020/US-Food-and-Drug-Administration-Approves-Bristol-Myers-Squibbs-ZEPOSIA-ozanimod-a-New-Oral-Treatment-for-Relapsing-Forms-of-Multiple-Sclerosis/default.aspx. Issued 03/26/2020. Last accessed 03/19/2021.
[6] Zeposia® Prescribing Information. Celgene Corporation. Available online at: https://packageinserts.bms.com/pi/pi_zeposia.pdf. Last revised 09/2020. Last accessed 03/19/2021.
[7] Zeposia® (Ozanimod) – New Drug Approval. OptumRx®. Available online at: https://professionals.optumrx.com/content/dam/optum3/professional-optumrx/news/rxnews/drug-approvals/drugapproval_zeposia_2020-0327.pdf. Last revised 2020. Last accessed 03/19/2021.

Appendix D

Vote to Prior Authorize Sevenfact® [Coagulation Factor VIIa (Recombinant)-jncw]

Oklahoma Health Care Authority
April 2021

Introduction[1,2,3]

Approximately 1 in 5 patients with hemophilia A and 3 in 100 patients with hemophilia B will develop an antibody to factor replacement products. These antibodies are called inhibitors, and inhibitor development is a major complication for patients living with hemophilia and can increase the risk of morbidity. Treatment of hemophilia in patients with inhibitors becomes difficult, very costly, and carries a large burden for the patient and caregivers. Both the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) recommend patients with inhibitors be seen at hemophilia treatment centers with extensive experience in managing hemophilia with inhibitors when possible.

Depending on the inhibitor levels, the treatment options vary. If the inhibitor level is low, then using large doses of clotting factor to overcome the inhibitor is an option. Some patients with inhibitors undergo immune tolerance induction (ITI) which attempts to teach the body that factor is a normal part of the blood. ITI requires large doses of factor every day for weeks to months and possibly years. ITI is successful in 70%-80% of patients with severe hemophilia A, but patients with hemophilia B have a lower success rate. Hemlibra® (emicizumab-kxwh), which mimics factor VIII (FVIII), can be used prophylactically to prevent bleeding episodes in patients with hemophilia A with or without an inhibitor. For those patients with high inhibitor levels, bypassing agents (BPAs) are used. BPAs can be used prophylactically and/or can be used to treat bleeding episodes. In April 2020, the U.S. Food and Drug Administration (FDA) approved a new product for patients with hemophilia A or B with inhibitors, Sevenfact® [coagulation factor VIIa (recombinant)-jncw]. This new product joins 2 other BPAs on the market, Feiba® (anti-inhibitor coagulant complex) and NovoSeven® RT [coagulation factor VIIa (recombinant)].

Recommendations

The Oklahoma Health Care Authority recommends the prior authorization of Sevenfact® [coagulation factor VIIa (recombinant)-jncw] with the following criteria:

Sevenfact® [Coagulation Factor VIIa (Recombinant)-jncw] Approval Criteria:

1. An FDA approved diagnosis; and
2. Sevenfact® must be prescribed by a hematologist specializing in rare bleeding disorders or a mid-level practitioner with a supervising physician that is a hematologist specializing in rare bleeding disorders.

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[1] Centers for Disease Control and Prevention (CDC). Inhibitors and Hemophilia. Available online at: https://www.cdc.gov/ncbddd/hemophilia/inhibitors.html. Last updated 07/17/2020. Last accessed 03/15/2021.

[2] U.S. Food and Drug Administration (FDA). FDA Approves Additional Treatment for Adults and Adolescents with Hemophilia A or B and Inhibitors. Available online at: https://www.fda.gov/news-events/press-announcements/fda-approves-additional-treatment-adults-and-adolescents-hemophilia-or-b-and-inhibitors#:~:text=The%20U.S.%20Food%20and%20Drug%20Administration%20today%20approved,hemophilia%20A%20or%20B%20with%20inhibitors%20%28neutralizing%20antibodies%29. Issued 04/01/2020. Last accessed 03/15/2021.

[3] Srivastava A, Santagostino E, Dougall A, et al. WFH Guidelines for the Management of Hemophilia, 3rd Edition. *Haemophilia* 2020; 26(S6):1-158. doi: 10.1111/hae.14046.

Appendix E

Vote to Prior Authorize Sogroya® (Somapacitan-beco)

Oklahoma Health Care Authority
April 2021

New U.S. Food and Drug Administration (FDA) Approval(s)[1,2,3,4]

Sogroya® (somapacitan-beco) was approved by the FDA in August 2020 for the replacement of endogenous growth hormone in adults with growth hormone deficiency (GHD). Sogroya® is the first product for GHD to be approved for once-weekly subcutaneous (sub-Q) administration; other FDA approved products are administered daily. Somapacitan is a human growth hormone (hGH) analog containing a single substitution in the 191 amino acid backbone. Specifically, a leucine at position 101 has been substituted for a cysteine, to which an albumin-binding side chain has been attached. By binding to albumin, the clearance of somapacitan is reduced and the half-life is extended, allowing for once-weekly dosing. Sogroya® is supplied as a solution containing 10mg/1.5mL somapacitan in a single-patient-use prefilled pen, administered as a sub-Q injection into the abdomen or thigh. Injection sites should be rotated regularly to avoid lipohypertrophy. The recommended initial dose is 1.5mg once weekly for most patients, and the dose should be titrated every 2 to 4 weeks by approximately 0.5mg to 1.5mg based on clinical response and serum insulin-like growth factor 1 (IGF-1) concentrations. An initial dose of 1mg once weekly should be used for patients 65 years of age and older or patients with moderate hepatic impairment. An initial dose of 2mg once weekly can be considered for patients receiving oral estrogen. The maximum recommended dose is 8mg once weekly.

The most common adverse reactions (occurring in >2% of patients receiving Sogroya® and ≥1% more than in placebo) in clinical trials were back pain, arthralgia, dyspepsia, sleep disorder, dizziness, tonsillitis, peripheral edema, vomiting, adrenal insufficiency, hypertension, blood creatine phosphokinase increase, weight increase, and anemia. Sogroya® is contraindicated with acute critical illness after open-heart surgery, abdominal surgery, or multiple accidental trauma, or in those with acute respiratory failure because of the risk of increased mortality with use of pharmacologic doses of Sogroya®; active malignancy; hypersensitivity to Sogroya® or any of its excipients; and active proliferative or severe non-proliferative diabetic retinopathy.

The safety and efficacy of Sogroya® were established in a 35-week double-blind, placebo-controlled study in 300 adult patients with GHD. Patients included in the study were all treatment-naïve or had no exposure to hGH therapy for >180 days prior to randomization. Patients were randomized 2:1:2 to receive somapacitan 10mg/1.5mL once weekly, placebo once weekly, or

somatropin 10mg/1.5mL once daily for a 34-week treatment period. The primary endpoint was the change from baseline in truncal fat percentage at week 34. Patients receiving once-weekly somapacitan had a 1.06% decrease from baseline in truncal fat. Patients receiving once-weekly placebo had a 0.47% increase from baseline in truncal fat. Patients receiving daily somatropin had a 2.23% decrease from baseline in truncal fat. The absolute treatment difference (comparing once-weekly somapacitan and once-weekly placebo) of -1.53% was statistically significant in favor of somapacitan (P=0.0090). Additionally, the average IGF-1 standard deviation score was normalized in patients receiving somapacitan but not in patients receiving placebo at week 34. There were no formal statistical comparisons performed between weekly somapacitan and daily somatropin in this study.

Cost: Cost information is not yet available for Sogroya®, and a launch date for the product has not yet been announced.

Recommendations

The College of Pharmacy recommends the placement of Sogroya® (somapacitan-beco) into Tier-2 of the growth hormone products Product Based Prior Authorization (PBPA) category with the following criteria:

Sogroya® (Somapacitan-beco) Approval Criteria:

1. Member must have a confirmed diagnosis of adult growth hormone deficiency (GHD) confirmed by 1 of the following:
    a. Insulin tolerance test (ITT) or glucagon test with a peak growth hormone (GH) response <3ng/mL; or
    b. ≥3 pituitary hormone deficiencies and insulin like growth factor-1 (IGF-1) standard deviation score (SDS) <-2.0; and
2. Member must be 18 years of age or older; and
3. Sogroya® must be prescribed by an endocrinologist; and
4. Member's baseline IGF-1 level and SDS must be provided; and
5. A patient-specific, clinically significant reason (beyond convenience) why the member cannot use all Tier-1 product(s) must be provided; and
6. Prescriber must verify the member does not have active malignancy or active proliferative or severe non-proliferative diabetic retinopathy; and
7. Prescriber must verify the member has been counseled on proper administration and storage of Sogroya®; and
8. Approval quantity will be based on the FDA approved dosing in accordance with the Sogroya® *Prescribing Information*; and
9. Initial approvals will be for the duration of 6 months. For additional approval consideration, compliance will be evaluated and the prescriber must verify the member is responding well to treatment as demonstrated by a reduction in truncal fat percentage or normalization of IGF-1 level (IGF-1 SDS of -0.5 to 1.75); and

10. A maximum approved dose of 8mg per week will apply.

Growth Hormone Products	
Tier-1*	**Tier-2**
Genotropin® (Pfizer) - Cartridge, MiniQuick	**Humatrope®** (Eli Lilly) - Vials, Cartridge Kits
	Norditropin® (NovoNordisk) - FlexPro® Pens
	Nutropin® and Nutropin AQ® (Genentech) - Vials, Pen Cartridge, NuSpin®
	Omnitrope® (Sandoz) - Vials, Cartridge
	Saizen® (EMD Serono) - Vials, click.easy®
	+Serostim® (EMD Serono) - Vials
	+Sogroya® (somapacitan-beco) (NovoNordisk) - Pens
	Zomacton® and Zoma-Jet® (Ferring) - Vials, Injection Device
	+Zorbtive® (EMD Serono) - Vials

*Supplementally rebated product(s); tier structure based on supplemental rebate participation and/or National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
+Additional approval criteria applies.
All products, other than Sogroya®, contain the identical 191 amino acid sequence found in pituitary-derived human growth hormone (hGH). For Sogroya®, 1 amino acid has been substituted and linked to an albumin-binding side chain.

[1] Park B. FDA Approves Sogroya®, a Once-Weekly Growth Hormone Deficiency Therapy. *MPR*. Available online at: https://www.empr.com/home/news/fda-approves-sogroya-a-once-weekly-growth-hormone-deficiency-therapy/. Issued 09/02/2020. Last accessed 03/29/2021.
[2] U.S. Food and Drug Administration (FDA). FDA Approves Weekly Therapy for Adult Growth Hormone Deficiency. Available online at: https://www.fda.gov/drugs/drug-safety-and-availability/fda-approves-weekly-therapy-adult-growth-hormone-deficiency. Issued 09/01/2020. Last accessed 03/29/2021.
[3] Sogroya® (Somapacitan-beco) Prescribing Information. Novo Nordisk, Inc. Available online at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2020/761156s000lbl.pdf. Last revised 08/2020. Last accessed 03/29/2021.
[4] Trial to Compare the Efficacy and Safety of NNC0195-0092 (Somapacitan) with Placebo and Norditropin® FlexPro® (Somatropin) in Adults with Growth Hormone Deficiency. (REAL 1). *ClinicalTrials.gov*. Available online at: https://clinicaltrials.gov/ct2/show/NCT02229851. Last revised 11/23/2020. Last accessed 03/29/2021.

Appendix F

Vote to Prior Authorize Nyvepria™ (Pegfilgrastim-apgf)

Oklahoma Health Care Authority
April 2021

New U.S. Food and Drug Administration (FDA) Approval(s)[1]

- **June 2020:** The FDA approved Nyvepria™ (pegfilgrastim-apgf) as a biosimilar to Neulasta® (pegfilgrastim) to decrease the incidence of chemotherapy-induced febrile neutropenia. The FDA approval was based on a comprehensive data package and totality of evidence demonstrating a high degree of similarity of Nyvepria™ to Neulasta®.

Nyvepria™ (Pegfilgrastim-apgf) Product Summary[2]

- **Therapeutic Class:** Granulocyte colony-stimulating factor (G-CSF)
- **Indication(s):** To decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia
- **How Supplied:** 6mg/0.6mL solution in a single-dose prefilled syringe
- **Recommended Dosing:**
  - 6mg administered subcutaneously (sub-Q) once per chemotherapy cycle
  - Should not be administered between 14 days before and 24 hours after administration of cytotoxic chemotherapy
  - Weight-based dosing should be used for pediatric patients weighing <45kg:

Body Weight	Dose
<10kg	0.1mg/kg (0.01mL/kg)
10 – 20kg	1.5mg
21 – 30kg	2.5mg
31 – 44kg	4mg

Cost Comparison: Pegfilgrastim Products

Medication	Cost Per Syringe (6mg/0.6mL)
Fulphila® (pegfilgrastim-jmdb)	$4,175.00
Udenyca® (pegfilgrastim-cbqv)	$4,175.00
Nyvepria™ (pegfilgrastim-apgf)	**$3,925.00**
Ziextenzo® (pegfilgrastim-bmez)	$3,575.54
Neulasta® (pegfilgrastim)	$3,079.36

Costs do not reflect rebated prices or net costs.
Costs based on Wholesale Acquisition Costs (WAC), National Average Drug Acquisition Costs (NADAC), or State Maximum Allowable Costs (SMAC).

Recommendations

The College of Pharmacy recommends the prior authorization of Nyvepria™ (pegfilgrastim-apgf), removing the prior authorization for Ziextenzo® (pegfilgrastim-bmez) based on net costs, and updating the current pegfilgrastim approval criteria with the following changes shown in red:

Fulphila® (Pegfilgrastim-jmdb), Nyvepria™ (Pegfilgrastim-apgf), and Udenyca® (Pegfilgrastim-cbqv)~~, Ziextenzo® (Pegfilgrastim-bmez)~~ Approval Criteria:

1. An FDA approved diagnosis; and
2. A patient-specific, clinically significant reason why the member cannot use Granix® (tbo-filgrastim), Neulasta® (pegfilgrastim), Neupogen® (filgrastim), Zarxio® (filgrastim-sndz), or Ziextenzo® (pegfilgrastim-bmez) must be provided. Biosimilars and/or reference products are preferred based on the lowest net cost product(s) and may be moved to either preferred or non-preferred if the net cost changes in comparison to the reference product and/or other available biosimilar products.

Additionally, the College of Pharmacy recommends removing the prior authorization for Granix® (tbo-filgrastim) and Zarxio® (filgrastim-sndz) based on net costs and updating the current filgrastim approval criteria with the following changes shown in red:

~~Granix® (Tbo-filgrastim),~~ Nivestym® (Filgrastim-aafi)~~, and Zarxio® (Filgrastim-sndz)~~ Approval Criteria:

1. An FDA approved diagnosis; and
2. A patient-specific, clinically significant reason why the member cannot use Granix® (tbo-filgrastim), Neupogen® (filgrastim), or Zarxio® (filgrastim-sndz) must be provided. Biosimilars and/or reference products are preferred based on the lowest net cost product(s) and may be moved to either preferred or non-preferred if the net cost changes in comparison to the reference product and/or other available biosimilar products.

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[1] Pfizer, Inc. FDA Approves Pfizer's Oncology Supportive Care Biosimilar, Nyvepria™ (Pegfilgrastim-apgf*). Business Wire*. Available online at: https://www.businesswire.com/news/home/20200611005430/en/FDA-Approves-Pfizer%E2%80%99s-Oncology-Supportive-Care-Biosimilar-NYVEPRIA%E2%84%A2-pegfilgrastim-apgf. Issued 06/11/2020. Last accessed 03/17/2021.

[2] Nyvepria™ (Pegfilgrastim-apgf) Prescribing Information. Pfizer. Available online at: http://labeling.pfizer.com/ShowLabeling.aspx?id=13622. Last revised 06/2020. Last accessed 03/17/2021.

Appendix G

Vote to Prior Authorize Barhemsys® (Amisulpride)

Oklahoma Health Care Authority
April 2021

New U.S. Food and Drug Administration (FDA) Approval(s)[1]

- **February 2020:** The FDA approved Barhemsys® (amisulpride) for the prevention and treatment of postoperative nausea and vomiting (PONV) in adult patients. Barhemsys® is a selective dopamine-2 (D_2) and dopamine-3 (D_3) receptor antagonist given via intravenous (IV) infusion. The approval was based on 4 positive Phase 3 studies of Barhemsys® for both the prevention and treatment of PONV. The FDA approval covers the prevention of PONV, either alone or in combination with an anti-emetic of a different class, and the treatment of PONV in patients who have received anti-emetic prophylaxis with an agent of a different class or who have not received prophylaxis.

Barhemsys® (Amisulpride) Product Summary[2]

- **Therapeutic Class:** Dopamine D_2 and D_3 receptor antagonist
- **Indication(s):** Prevention and treatment of PONV
- **How Supplied:** 5mg/2mL (2.5mg/mL) or 10mg/4mL (2.5mg/mL) single-dose vials
- **Recommended Dosing:**
  - Prevention of PONV, either alone or in combination with another anti-emetic: 5mg as a single IV dose infused over 1 to 2 minutes at the time of induction of anesthesia
  - Treatment of PONV: 10mg as a single IV dose infused over 1 to 2 minutes in the event of nausea and/or vomiting after a surgical procedure

Cost Comparison: Anti-Emetics Used For PONV

Medication	Cost Per Unit*	Cost Per Vial or Patch
Barhemsys® 10mg/4mL SDV	**$21.25**	**$85.00**
Barhemsys® 5mg/2mL SDV	**$21.25**	**$42.50**
scopolamine 1mg/3 days patch	$14.39	$14.39
granisetron 1mg/mL SDV	$10.85	$10.85
dexamethasone 4mg/mL SDV	$0.78	$0.78
ondansetron 4mg/2mL SDV	$0.27	$0.55

SDV = single-dose vial
*Unit = 1mL or 1 patch
Costs do not reflect rebated prices or net costs. Costs based on Wholesale Acquisition Costs (WAC), National Average Drug Acquisition Costs (NADAC), or State Maximum Allowable Costs (SMAC).

Recommendations

The College of Pharmacy recommends the prior authorization of Barhemsys® (amisulpride) with the following criteria:

Barhemsys® (Amisulpride) Approval Criteria:

1. An FDA approved indication of 1 of the following:
   a. Prevention of postoperative nausea and vomiting (PONV), either alone or in combination with an anti-emetic of a different class; or
   b. Treatment of PONV in members who have received anti-emetic prophylaxis with an agent of a different class or who have not received prophylaxis; and
2. Member must be 18 years of age or older; and
3. Member must not have received a preoperative dopamine-2 (D_2) antagonist (e.g., metoclopramide); and
4. A patient-specific, clinically significant reason why the member cannot use other cost-effective therapeutic alternatives for the prevention or treatment of PONV (e.g. ondansetron, dexamethasone) must be provided.

[1] Keown A. FDA Approves Acacia Pharma's Barhemsys for PONV. *Biospace*. Available online at: https://www.biospace.com/article/fda-approves-acacia-pharma-s-barhemsys-for-ponv/. Issued 02/27/2020. Last Accessed 03/08/2021.
[2] Barhemsys® Prescribing Information. Acacia Pharma. Available online at: https://bynder.acaciapharma.com/m/5d7c2cd0d58865f7/original/Barhemsys-Prescribing-Information.pdf. Last revised 09/2020. Last accessed 03/08/2021.

Appendix H

Vote to Prior Authorize Orladeyo™ (Berotralstat)

Oklahoma Health Care Authority
April 2021

Introduction[1,2]

Orladeyo™ (berotralstat) is a plasma kallikrein inhibitor approved by the U.S. Food and Drug Administration (FDA) in December 2020 for the prophylaxis of hereditary angioedema (HAE) attacks in adults and pediatric patients 12 years of age and older. Orladeyo™ should not be used for treatment of acute HAE attacks. Orladeyo™ is supplied as 110mg and 150mg oral capsules, available in a 28-day supply carton containing (4) 7-capsule blister cards. The recommended dosing is 150mg once daily with food. A dose of 110mg once daily with food is recommend for patients with moderate or severe hepatic impairment, patients taking P-glycoprotein (P-gp) or breast cancer resistance protein (BCRP) inhibitors (e.g., cyclosporine), and patients taking the 150mg dose with persistent gastrointestinal (GI) reactions.

The efficacy of berotralstat for the prevention of HAE attacks in patients 12 years of age and older with Type I or II HAE was demonstrated in part 1 of a multicenter, randomized, double-blind, placebo-controlled, parallel-group study. The study included 120 adult and adolescent patients who experienced at least 2 investigator confirmed HAE attacks within the first 8 weeks of the run-in period and took at least 1 dose of study treatment. Patients were randomized into 1 of 3 parallel treatment arms, stratified by baseline HAE attack rate, in a 1:1:1 ratio (berotralstat 110mg, berotralstat 150mg, or placebo) for the 24-week treatment period. Patients discontinued other prophylactic HAE medications prior to entering the study; however, all patients were allowed to use rescue medications for treatment of breakthrough HAE attacks. Berotralstat 150mg and 110mg produced statistically significant reductions in the rate of HAE attacks compared to placebo for the primary endpoint in the intent-to-treat (ITT) population. In the 110mg group, there was a 30% rate reduction in HAE attacks compared to the placebo group ($P=0.024$). In the 150mg group, there was a 44.2% rate reduction in HAE attacks compared to the placebo group ($P<0.001$). Reductions in attack rates were observed in the first month of treatment with berotralstat 150mg and 110mg and were sustained through 24 weeks.

Cost Comparison:

Medication	Cost Per Unit	Cost Per 28 Days*
Orladeyo™ (berotralstat) 150mg capsule	**$1,332.43**	**$37,308.04**
Cinryze® (C1 esterase inhibitor) 500mg/5mL vial	$2,841.55	$45,464.80
Haegarda® (C1 esterase inhibitor) 2,000 or 3,000 IU/vial	$1,994.49 or $2,991.73	$39,889.80Δ
Takhzyro® (lanadelumab-flyo) 300mg/2mL vial	$23,414.06	$46,828.12

Costs do not reflect rebated prices or net costs. Costs based on National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
Unit = capsule or vial
*Cost per 28 days based on FDA recommended dosing.
ΔCost per 28 days based on FDA recommended dosing of 60 IU/kg twice weekly for a 75kg patient.

Guideline Update(s): The United States Hereditary Angioedema Association Medical Advisory Board (US HAEA MAB) published updated guidelines for HAE management in 2020. Recommendations were made for HAE classification and pathophysiology, HAE diagnosis, considerations for children, specific issues in the management of HAE in women, burden of illness, and the following pertaining to treatment of HAE.

- On-demand treatment of HAE attacks, strong recommendations for the following:
  - Patients must have ready access to effective on-demand medication to administer at the onset of an HAE attack. An FDA-approved on-demand HAE medication [ecallantide, icatibant, plasma-derived C1 inhibitor (pdC1INH), or recombinant human C1INH (rhC1INH)] should be used as first-line treatment for attacks whenever possible.
  - On-demand treatment of HAE attacks should be self-administered (or administered by a caregiver) whenever feasible except when treating with ecallantide which needs to be administered by a health care provider.
  - All HAE attacks are eligible for treatment irrespective of the location of the swelling or the severity of the attack.
- Prophylactic treatment of HAE attacks, strong recommendations for the following:
  - Short-term prophylaxis is indicated when patients are at increased risk of having an attack associated with known triggers such as invasive dental or medical procedures or stressful life events [strong for HAE due to a deficiency of C1INH (HAE-C1INH), weak for HAE with normal C1INH (HAE-nl-C1INH)].

- The decision on when to use long-term prophylactic treatment cannot be made on rigid criteria, but should reflect the needs of the individual patient.
- Long-term prophylactic treatment of HAE-C1INH should include first-line medications [intravenous (IV) C1INH, subcutaneous (sub-Q) C1INH, or lanadelumab].

- Management plans for HAE attacks, strong recommendations for the following:
  - HAE management plans must be individualized to each patient's needs due to wide variability in HAE symptoms, response to and tolerance of various HAE medications, and numerous factors impacting clinical course and quality of life. Treatment plans should be monitored regularly and adjusted based on the needs of the patient.
  - HAE management plans should include:
    - Effective on-demand medication for every patient; and
    - Consideration of long-term prophylactic medications to prevent HAE attacks; and
    - Use of short-term prophylactic medications before medical procedures or other events known to trigger HAE symptoms.
  - Consultation with an HAE expert physician is recommended to optimize individualized treatment plans, assist with coordination of care, and provide important patient and family education.

Recommendations

The College of Pharmacy recommends the prior authorization of Orladeyo™ (berotralstat) and recommends updating the Cinryze® (C1 esterase inhibitor), Haegarda® (C1 esterase inhibitor), and Takhzyro® (lanadelumab-flyo) approval criteria to be consistent with the current treatment guidelines with the following criteria (changes and additions noted in red):

Cinryze® (C1 Esterase Inhibitor), Haegarda® (C1 Esterase Inhibitor), Orladeyo™ (Berotralstat), and Takhzyro® (Lanadelumab-flyo) Approval Criteria:

1. An FDA approved diagnosis of hereditary angioedema (HAE); and
2. Must be used for *prophylaxis* of HAE; and
3. Not currently taking an angiotensin converting enzyme (ACE) inhibitor or estrogen replacement therapy; and
4. ~~History of at least 1 or more abdominal or respiratory HAE attacks per month, or history of laryngeal attacks, or 3 or more emergency medical treatments per year; or~~ Based on HAE attack frequency, attack severity, comorbid conditions, and member's access to emergent treatment, the prescriber has determined long-term prophylaxis is appropriate for the member; or

5. Approval consideration will be given if the member has a recent hospitalization for a severe episode of angioedema; and
6. Authorization of Cinryze® or Haegarda® will also require a patient-specific, clinically significant reason why the member cannot use Orladeyo™; and
7. Authorization of Takhzyro® (lanadelumab-flyo) will also require a patient-specific, clinically significant reason why the member cannot use Cinryze®, Haegarda®, or Orladeyo™; and
8. Cinryze® Dosing:
    a. The recommended dose of Cinryze® is 1,000 units intravenously (IV) every 3 to 4 days, approximately 2 times per week, to be infused at a rate of 1mL/min; and
    b. Initial doses should be administered in an outpatient setting by a health care provider; members can be taught by their health care provider to self-administer Cinryze® IV; and
    c. A quantity limit of 8,000 units per month will apply (i.e., 2 treatments per week or 8 treatments per 28 days); or
9. Haegarda® Dosing:
    a. The recommended dose of Haegarda® is 60 IU/kg subcutaneously (sub-Q) twice weekly; and
    b. The member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to package labeling; and
    c. A quantity limit of 2 treatments per week or 8 treatments per 28 days will apply; or
10. Orladeyo™ Dosing:
    a. The recommended dose of Orladeyo™ is 150mg by mouth once daily; and
    b. A quantity limit of 28 capsules per 28 days will apply; or
11. Takhzyro® Dosing:
    a. The recommended dose of Takhzyro® is 300mg sub-Q every 2 weeks (dosing every 4 weeks may be considered in some members); and
    b. Prescriber must verify member or caregiver has been trained by a health care professional on proper storage and sub-Q administration of Takhzyro®; and
    c. A quantity limit of (2) 300mg/2mL vials per 28 days will apply.

Additionally, the College of Pharmacy recommends updating the prior authorization criteria for Berinert® (C1 esterase inhibitor), Firazyr® (icatibant), Kalbitor® (ecallantide), and Ruconest® (C1 esterase inhibitor) based on net costs with the following criteria (changes noted in red):

Berinert® (C1 Esterase Inhibitor), Firazyr® (Icatibant), Kalbitor® (Ecallantide), and Ruconest® (C1 Esterase Inhibitor) Approval Criteria:

1. An FDA approved diagnosis of hereditary angioedema (HAE); and
2. Must be used for the *treatment* of acute attacks of HAE; and
3. For authorization consideration of Firazyr® (icatibant) or Kalbitor® (ecallantide), a patient-specific, clinically significant reason why the member cannot use Berinert® (C1 esterase inhibitor) ~~and Firazyr® (icatibant)~~ must be provided; or
4. For authorization consideration of Ruconest® (C1 esterase inhibitor), a patient-specific, clinically significant reason why the member cannot use Berinert® (C1 esterase inhibitor), Firazyr® (icatibant), or Kalbitor® (ecallantide) must be provided.

[1] Orladeyo™ Prescribing Information. BioCryst Pharmaceuticals, Inc. Available online at: https://orladeyohcp.com/wp-content/uploads/ORLADEYO_PI_V1_2020.pdf. Last revised 12/2020. Last accessed 03/18/2021.
[2] Busse PG, Christiansen SC, Riedl MA, et al. US HAEA Medical Advisory Board 2020 Guideline for the Management of Hereditary Angioedema. *J Allergy Clin Immunol Pract* 2021; 9:132-50.

Appendix I

Vote to Prior Authorize Prior Authorize Breyanzi® (Lisocabtagene Maraleucel), Monjuvi® (Tafasitamab-cxix), Romidepsin 27.5mg/5.5mL Vial, Tecartus™ (Brexucabtagene Autoleucel), and Ukoniq™ (Umbralisib)

Oklahoma Health Care Authority
April 2021

New U.S. Food and Drug Administration (FDA) Approval(s) and Indication(s)[1,2]

- **March 2020:** The FDA approved a New Drug Application (NDA) submitted by Teva Pharmaceuticals for romidepsin 27.5mg/5.5mL. Teva's romidepsin 27.5mg/5.5mL was approved for the same active ingredient, route of administration, concentration of active ingredient, and indications as Istodax® [romidepsin lyophilized powder in a 10mg single-dose vial (SDV)]. Romidepsin 27.5mg/5.5mL differs in its dosage form and presentation. It is supplied as a sterile, clear solution in a SDV. No clinical studies were performed with the Teva formulation. The NDA was approved based on the findings of safety and effectiveness for Istodax®.
- **June 2020:** The FDA granted accelerated approval to Tazverik® (tazemetostat), an EZH2 inhibitor, for adult patients with relapsed or refractory follicular lymphoma (FL) whose tumors are positive for an *EZH2* mutation and who have received at least 2 prior systemic therapies, and for adult patients with relapsed or refractory FL who have no satisfactory alternative treatment options.
- **July 2020:** The FDA granted accelerated approval to Tecartus™ (brexucabtagene autoleucel), a CD19-directed genetically modified autologous T-cell immunotherapy, for adult patients with relapsed or refractory mantle cell lymphoma (MCL).
- **July 2020:** The FDA granted accelerated approval to Monjuvi® (tafasitamab-cxix), a CD19-directed cytolytic antibody, indicated in combination with lenalidomide for adult patients with relapsed or refractory diffuse large B-cell lymphoma (DLBCL) not otherwise specified, including DLBCL arising from low grade lymphoma, and who are not eligible for autologous stem cell transplant (ASCT).
- **January 2021:** The FDA approved the combination of Opdivo® (nivolumab) and Cabometyx® (cabozantinib) as first-line treatment for patients with advanced renal cell carcinoma (RCC).

- **January 2021:** The FDA approved Xalkori® (crizotinib) for pediatric patients 1 year of age and older and young adults with relapsed or refractory, systemic anaplastic large cell lymphoma (ALCL) that is anaplastic lymphoma kinase (ALK)-positive. The safety and efficacy of crizotinib have not been established in older adults with relapsed or refractory, systemic ALK-positive ALCL.
- **February 2021:** The FDA approved Breyanzi® (lisocabtagene maraleucel) for adult patients with relapsed or refractory large B-cell lymphoma after 2 or more lines of systemic therapy, including DLBCL not otherwise specified (including DLBCL arising from indolent lymphoma), high-grade B-cell lymphoma, primary mediastinal large B-cell lymphoma, and FL grade 3B.
- **February 2021:** The FDA granted accelerated approval to Ukoniq™ (umbralisib), a kinase inhibitor including PI3K-delta and casein kinase 1 (CK1)-epsilon, for the following indications:
  - Adult patients with relapsed or refractory marginal zone lymphoma (MZL) who have received at least 1 prior anti-CD20-based regimen; and
  - Adult patients with relapsed or refractory FL who have received at least 3 prior lines of systemic therapy.
- **March 2021:** The FDA granted accelerated approval to Yescarta® (axicabtagene ciloleucel) for adult patients with relapsed or refractory FL after 2 or more lines of systemic therapy.

Recommendations

The College of Pharmacy recommends the prior authorization of Breyanzi® with the following criteria, including an update based on net cost in comparison to other available chimeric antigen receptor (CAR) T-cell therapies indicated for large B-cell lymphoma (items shown in red are changes from what was included in the March 2021 DUR Board packet):

Breyanzi® (Lisocabtagene Maraleucel) Approval Criteria [Lymphoma Diagnosis]:

1. Diagnosis of large B-cell lymphoma; and
2. Relapsed or refractory disease; and
3. Member must have received at least 2 lines of systemic therapy; and
4. Health care facilities must be on the certified list to administer chimeric antigen receptor (CAR) T-cells and must be trained in the management of cytokine release syndrome (CRS), neurologic toxicities, and comply with the risk evaluation and mitigation strategy (REMS) requirements; and
5. A patient-specific, clinically significant reason why Yescarta® (axicabtagene) or Kymriah® (tisagenlecleucel) is not appropriate for the member must be provided.

The College of Pharmacy also recommends the prior authorization of Monjuvi® (tafasitamab-cxix), Tecartus™ (brexucabtagene autoleucel), and Ukoniq™ (umbralisib) with the following criteria (shown in red):

Monjuvi® (Tafasitamab-cxix) Approval Criteria [Diffuse Large B-Cell Lymphoma (DLBCL) Diagnosis]:

1. Diagnosis of DLBCL in adults; and
2. Relapsed or refractory disease; and
3. Used in combination with lenalidomide.

Tecartus™ (Brexucabtagene Autoleucel) Approval Criteria [Lymphoma Diagnosis]:

1. Diagnosis of mantle cell lymphoma; and
2. Relapsed or refractory disease; and
3. Health care facilities must be on the certified list to administer chimeric antigen receptor (CAR) T-cells and must be trained in the management of cytokine release syndrome (CRS), neurologic toxicities, and comply with the risk evaluation and mitigation strategy (REMS) requirements.

Ukoniq™ (Umbralisib) Approval Criteria [Marginal Zone Lymphoma (MZL) Diagnosis]:

1. Diagnosis of MZL; and
2. Relapsed or refractory disease; and
3. Member must have received at least 1 prior anti-CD20-based regimen.

Ukoniq™ (Umbralisib) Approval Criteria [Follicular Lymphoma (FL) Diagnosis]:

1. Diagnosis of FL; and
2. Relapsed or refractory disease; and
3. Member must have received at least 3 prior lines of systemic therapy.

Additionally, the College of Pharmacy recommends the prior authorization of romidepsin 27.5mg/5.5mL vial with the same criteria as the Istodax® (romidepsin) approval criteria (changes noted in red):

Istodax® (Romidepsin) and Romidepsin 27.5mg/5.5mL Vial Approval Criteria [Primary Cutaneous Lymphomas – Mycosis Fungoides (MF)/Sézary Syndrome (SS) Diagnosis]:

1. As a single-agent as primary treatment or in relapsed/refractory disease.

Istodax® (Romidepsin) and Romidepsin 27.5mg/5.5mL Vial Approval Criteria [Anaplastic Large Cell Lymphoma (ALCL), Primary Cutaneous Diagnosis]:

1. As a single-agent in members with multifocal lesions or regional nodes either as primary treatment or in relapsed/refractory disease.

Istodax® (Romidepsin) and Romidepsin 27.5mg/5.5mL Vial Approval Criteria [Peripheral T-Cell Lymphoma (PTCL) Diagnosis]:

1. As a single-agent in relapsed/refractory disease.

Istodax® (Romidepsin) and Romidepsin 27.5mg/5.5mL Vial Approval Criteria [T-Cell Lymphoma, Extranodal NK/T-Cell Lymphoma, Nasal Type Diagnosis]:

1. As a single-agent; and
2. Relapsed/refractory disease following additional therapy with an alternate combination chemotherapy regimen not previously used.

Finally, the College of Pharmacy recommends updating the Opdivo® (nivolumab), Tazverik® (tazemetostat), Xalkori® (crizotinib), and Yescarta® (axicabtagene ciloleucel) approval criteria based on recent FDA approvals (changes and new criteria noted in red; only criteria with updates are listed):

Opdivo® (Nivolumab) Approval Criteria [Renal Cell Carcinoma (RCC) Diagnosis]:

1. Member has not previously failed other PD-1 inhibitors [e.g., Keytruda® (pembrolizumab)]; and
2. Used in 1 of the following settings:
    a. For nivolumab monotherapy:
        i. Diagnosis of relapsed or surgically unresectable stage IV disease; and
        ii. Failed prior therapy with 1 of the following medications:
            1. Sunitinib; or
            2. Sorafenib; or
            3. Pazopanib; or
            4. Axitinib; or
    b. For nivolumab use in combination with ipilimumab:
        i. Diagnosis of relapsed or surgically unresectable stage IV disease in the initial treatment of members with intermediate or poor risk, previously untreated, advanced RCC; or
    c. For nivolumab use in combination with cabozantinib:
        i. Diagnosis of relapsed or surgically unresectable stage IV disease in the initial treatment of members with advanced RCC; and
3. Dose as follows:
    a. Single-agent: 240mg every 2 weeks or 480mg every 4 weeks; or
    b. In combination with ipilimumab: nivolumab 3mg/kg followed by ipilimumab 1mg/kg on the same day, every 3 weeks for a maximum of 4 doses, then nivolumab 240mg every 2 weeks or 480mg every 4 weeks thereafter.

Tazverik® (Tazemetostat) Approval Criteria [Follicular Lymphoma (FL) Diagnosis]:

1. Treatment of adult members with relapsed/refractory disease; and
2. *EZH2* mutation detected; and
3. Member must have received 2 lines of therapy or as subsequent therapy with no satisfactory alternative treatment options.

Xalkori® (Crizotinib) Approval Criteria [Anaplastic Large Cell Lymphoma (ALCL) Diagnosis]:

1. Members 1 to 21 years of age:
   a. Diagnosis of systemic ALCL that is anaplastic lymphoma kinase (ALK)-positive; and
   b. Relapsed or refractory disease; or
2. Members older than 21 years of age:
   a. Diagnosis of systemic ALCL that is ALK-positive; and
   b. Second-line or initial palliative intent therapy and subsequent therapy.

Yescarta® (Axicabtagene) Approval Criteria [Lymphoma Diagnosis]:

1. Diagnosis of large B-cell lymphoma [including diffuse large B cell lymphoma (DLBCL), high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma (FL)] or FL; and
2. Member must be 18 years of age or older; and
3. Relapsed or refractory disease; and
4. Member must have had 2 or more lines of therapy; and
5. Health care facilities must be on the certified list to administer chimeric antigen receptor (CAR) T-cells and must be trained in the management of cytokine release syndrome (CRS), neurologic toxicities, and comply with the REMS requirements; and
6. For large B-cell lymphoma (including DLBCL, high grade B-cell lymphoma, and DLBCL arising from FL), member must not have primary central nervous system lymphoma.

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[1] U.S. Food and Drug Administration (FDA). Center For Drug Evaluation and Research Summary Review. Available online at: https://www.accessdata.fda.gov/drugsatfda_docs/nda/2020/208574Orig1s000,Orig2s000SumR.pdf. Issued 02/17/2020. Last accessed 03/17/2021.

[2] U.S. FDA. Hematology/Oncology (Cancer) Approvals & Safety Notifications. Available online at: https://www.fda.gov/drugs/resources-information-approved-drugs/hematologyoncology-cancer-approvals-safety-notifications. Last revised 02/09/2021. Last accessed 03/08/2021.

Appendix J

Calendar Year 2020 Annual Review of Antihypertensive Medications

Oklahoma Health Care Authority
April 2021

Current Prior Authorization Criteria

There are 7 major subcategories of antihypertensive medications divided by drug class currently included in the Antihypertensive Medications Product Based Prior Authorization (PBPA) category:

1. Angiotensin I Converting Enzyme Inhibitors (ACEIs)
2. Calcium Channel Blockers (CCBs)
3. ACEI/CCB Combination Products
4. ACEI/Hydrochlorothiazide (HCTZ) Combination Products
5. Angiotensin II Receptor Blockers (ARBs)
6. ARB Combination Products
7. Direct Renin Inhibitors (DRIs) and DRI Combination Products

Angiotensin I Converting Enzyme Inhibitors (ACEIs)		
Tier-1	**Tier-2**	**Special PA**
benazepril (Lotensin®)	captopril (Capoten®)	enalapril powder (Epaned®)
enalapril (Vasotec®)		lisinopril oral solution (Qbrelis®)
enalaprilat (Vasotec® IV)		
fosinopril (Monopril®)		
lisinopril (Prinivil®, Zestril®)		
moexipril (Univasc®)		
perindopril (Aceon®)		
quinapril (Accupril®)		
ramipril (Altace®)		
trandolapril (Mavik®)		
ACEI/Hydrochlorothiazide (HCTZ) Combination Products		
Tier-1	**Tier-2**	**Special PA**
benazepril/HCTZ (Lotensin® HCT)	captopril/HCTZ (Capozide®)	fosinopril/HCTZ (Monopril-HCT®)
enalapril/HCTZ (Vasoretic®)		
lisinopril/HCTZ (Prinzide®, Zestoretic®)		
moexipril/HCTZ (Uniretic®)		
quinapril/HCTZ (Accuretic®)		

Angiotensin II Receptor Blockers (ARBs) and ARB Combination Products		
Tier-1	**Tier-2**	**Tier-3**
irbesartan (Avapro®)	candesartan (Atacand®)	azilsartan (Edarbi®)
irbesartan/HCTZ (Avalide®)	olmesartan/amlodipine/HCTZ (Tribenzor®)	azilsartan/chlorthalidone (Edarbyclor®)
losartan (Cozaar®)	telmisartan/HCTZ (Micardis® HCT)	candesartan/HCTZ (Atacand® HCT)
losartan/HCTZ (Hyzaar®)		eprosartan (Teveten®)
olmesartan (Benicar®)		eprosartan/HCTZ (Teveten® HCT)
olmesartan/amlodipine (Azor®)		telmisartan/amlodipine (Twynsta®)
olmesartan/HCTZ (Benicar HCT®)		
telmisartan (Micardis®)		
valsartan (Diovan®)		
valsartan/amlodipine (Exforge®)		
valsartan/amlodipine/HCTZ (Exforge® HCT)		
valsartan/HCTZ (Diovan HCT®)		
Calcium Channel Blockers (CCBs)		
Tier-1	**Tier-2**	**Special PA**
amlodipine (Norvasc®)	amlodipine/atorvastatin (Caduet®)	amlodipine oral suspension (Katerzia®)
diltiazem (Cardizem®)	diltiazem LA (Cardizem® LA, Matzim® LA)	amlodipine/celecoxib (Consensi®)
diltiazem (Tiazac®, Taztia XT®)	diltiazem SR (Cardizem® SR)	diltiazem CD 360mg (Cardizem® CD)
diltiazem CD (Cardizem® CD)*	isradipine (Dynacirc®, Dynacirc CR®)	levamlodipine (Conjupri®)
diltiazem ER (Cartia XT®, Diltia XT®)	nicardipine (Cardene®)	
diltiazem XR (Dilacor® XR)	nicardipine (Cardene® SR)	
felodipine (Plendil®)	nisoldipine (Sular®)	
nifedipine (Adalat®, Procardia®)	verapamil (Covera-HS®)	
nifedipine ER (Adalat® CC)	verapamil ER (Verelan®, Verelan® PM)	
nifedipine XL (Nifedical XL®, Procardia XL®)		
nimodipine (Nimotop®)		
verapamil (Calan®, Isoptin®)		
verapamil SR (Calan® SR, Isoptin® SR)		

ACEI/CCB Combination Products		
Tier-1	**Tier-2**	**Special PA**
Tier-1 ACEI + Tier-1 CCB	trandolapril/verapamil (Tarka®)	perindopril/amlodipine (Prestalia®)
benazepril/amlodipine (Lotrel®)		

*All strengths other than 360mg.
CD = controlled-delivery; ER, XR, XL = extended-release; LA = long-acting; SR = sustained-release

Antihypertensive Medications Tier-2 Approval Criteria:
(or Tier-3 approval criteria when no Tier-2 medications exist)

1. A documented inadequate response to 2 Tier-1 medications (trials must include medication(s) from all available classes where applicable); or
2. An adverse drug reaction to all Tier-1 classes of medications; or
3. Previous stabilization on the Tier-2 medication; or
4. A unique indication for which the Tier-1 antihypertensive medications lack.

Antihypertensive Medications Tier-3 Approval Criteria:

1. A documented inadequate response to 2 Tier-1 medications and documented inadequate response to all available Tier-2 medication(s); or
2. An adverse drug reaction to all Tier-1 and Tier-2 classes of medications; or
3. Previous stabilization on the Tier-3 medication; or
4. A unique indication for which the lower tiered antihypertensive medications lack.

Antihypertensive Medications Special Prior Authorization (PA) Approval Criteria:

1. **Angiotensin I Converting Enzyme Inhibitors (ACEIs):**
    a. **Epaned® (Enalapril Solution) Approval Criteria:**
        i. An age restriction of 7 years or older will apply with the following criteria:
            1. Consideration for approval requires a patient-specific, clinically significant reason why the member cannot use the oral tablet formulation even when crushed.
    b. **Qbrelis® (Lisinopril Oral Solution) Approval Criteria:**
        i. A patient-specific, clinically significant reason why the member cannot use lisinopril oral tablets in place of the oral solution formulation, even when the tablets are crushed, must be provided.
2. **ACEI/Hydrochlorothiazide (HCTZ) Combination Products:**
    a. **Monopril-HCT® (Fosinopril/HCTZ) Approval Criteria:**

i. Authorization requires a patient-specific, clinically significant reason why the member cannot use the individual components.

3. **Calcium Channel Blockers (CCBs):**
   a. **Cardizem® CD (Diltiazem CD 360mg Capsules) Approval Criteria:**
      i. Authorization requires a patient-specific, clinically significant reason why the member cannot use (2) 180mg Cardizem® CD (diltiazem CD) capsules.
   b. **Conjupri® (Levamlodipine Tablets) Approval Criteria:**
      i. A patient-specific, clinically significant reason why the member cannot use amlodipine oral tablets, which are available without prior authorization, must be provided.
   c. **Consensi® (Amlodipine/Celecoxib Tablets) Approval Criteria:**
      i. A patient-specific, clinically significant reason why the member cannot use the individual components separately, which are available without prior authorization, must be provided; and
      ii. A quantity limit of 30 tablets per 30 days will apply.
   d. **Katerzia® (Amlodipine Oral Suspension) Approval Criteria:**
      i. An FDA approved diagnosis of hypertension or coronary artery disease; and
      ii. A patient specific, clinically significant reason why the member cannot use amlodipine oral tablets, even when crushed, must be provided; and
      iii. A quantity limit of 300mL per 30 days will apply.
4. **ACEI/CCB Combination Products:**
   a. **Prestalia® (Perindopril/Amlodipine) Approval Criteria:**
      i. An FDA approved diagnosis; and
      ii. Documented trials of inadequate response to 2 Tier-1 angiotensin I converting enzyme inhibitors (ACEIs) in combination with amlodipine; and
      iii. A patient-specific, clinically significant reason why the member cannot use the individual components separately must be provided; and
      iv. A quantity limit of 30 tablets per 30 days will apply.

The following restrictions also apply for each individual product based on U.S. Food and Drug Administration (FDA) approval information, special formulations, or individualized Drug Utilization Review (DUR) Board recommended criteria:

CaroSpir® (Spironolactone Oral Suspension) Approval Criteria:

1. An FDA approved indication; and
2. A patient-specific, clinically significant reason why the member cannot use spironolactone oral tablets must be provided.

Hemangeol™ (Propranolol Hydrochloride Oral Solution) Approval Criteria:

1. An FDA approved indication of treatment of proliferating infantile hemangioma requiring systemic therapy.

Kapspargo™ Sprinkle [Metoprolol Succinate Extended-Release (ER) Capsules] Approval Criteria:

1. A patient-specific, clinically significant reason why the member cannot use metoprolol succinate ER tablets, which are available without prior authorization, must be provided.

Nymalize® (Nimodipine Oral Solution) Approval Criteria:

1. A patient-specific, clinically significant reason why the member cannot use nimodipine liquid-filled capsules, which are available without prior authorization and can be opened for administration of the liquid contents via oral syringe for members unable to swallow the capsules whole, must be provided.

Sotylize® (Sotalol Oral Solution) Approval Criteria:

1. An FDA approved diagnosis of life-threatening ventricular arrhythmias or for the maintenance of normal sinus rhythm in members with highly symptomatic atrial fibrillation/flutter; and
2. A patient-specific, clinically significant reason why the member cannot use sotalol oral tablets in place of the oral solution formulation must be provided; and
3. A quantity limit of 64mL per day or 1,920mL per 30 days will apply.

Tekturna® (Aliskiren Oral Pellets and Tablets) and Tekturna HCT® (Aliskiren/Hydrochlorothiazide) Approval Criteria:

1. An FDA approved indication; and
2. Member must be 6 years of age or older; and
3. A recent trial, within the previous 6 months and at least 4 weeks in duration, of an angiotensin I converting enzyme inhibitor (ACEI) [or an angiotensin II receptor blocker (ARB) if previous trial of an ACEI] and a diuretic, used concomitantly at recommended doses, that did not yield adequate blood pressure control; and
4. May be used in either monotherapy or combination therapy; and

5. For Tekturna® oral pellets, a patient-specific, clinically significant reason why the member cannot use Tekturna® tablets must be provided.

Vecamyl® (Mecamylamine) Approval Criteria:

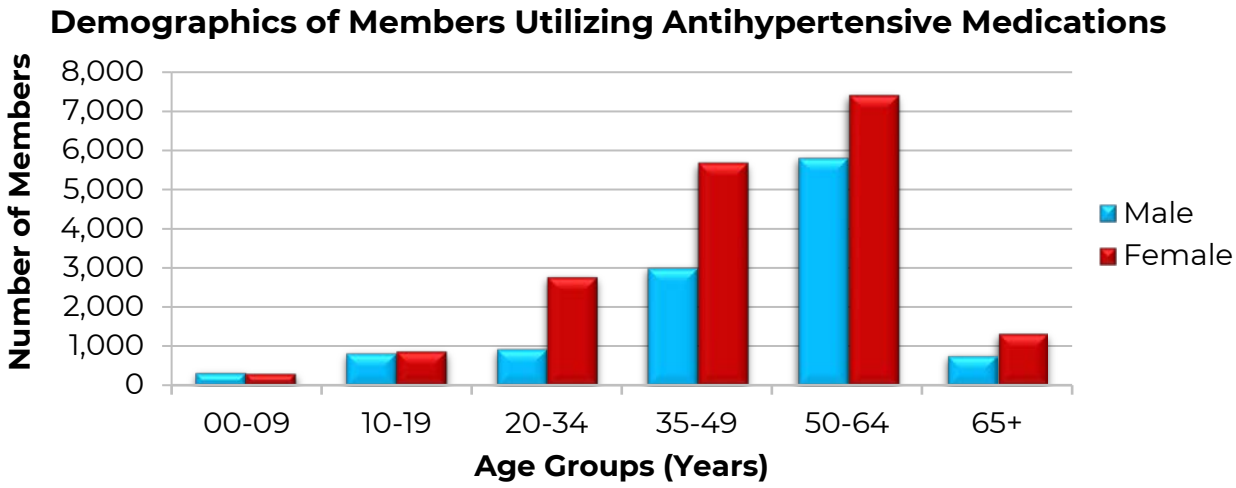
1. An FDA approved diagnosis of moderately-severe-to-severe essential hypertension or uncomplicated malignant hypertension; and
2. Use of at least 6 classes of medications, in the past 12 months, that did not yield adequate blood pressure control. Treatment must have included combination therapy with a diuretic and therapy with at least a 4-drug regimen. Medications can be from, but not limited to, the following classes: angiotensin I converting enzyme inhibitors (ACEIs), angiotensin II receptor blockers (ARBs), calcium channel blockers (CCBs), direct renin inhibitors (DRIs), beta blockers, alpha blockers, alpha agonists, or diuretics; and
3. Prescriber must verify member does not have any of the following contraindications:
    a. Coronary insufficiency; or
    b. Recent myocardial infarction; or
    c. Rising or elevated blood urea nitrogen (BUN), or known renal insufficiency; or
    d. Uremia; or
    e. Glaucoma; or
    f. Organic pyloric stenosis; or
    g. Currently receiving sulfonamides or antibiotics; or
    h. Known sensitivity to Vecamyl® (mecamylamine).

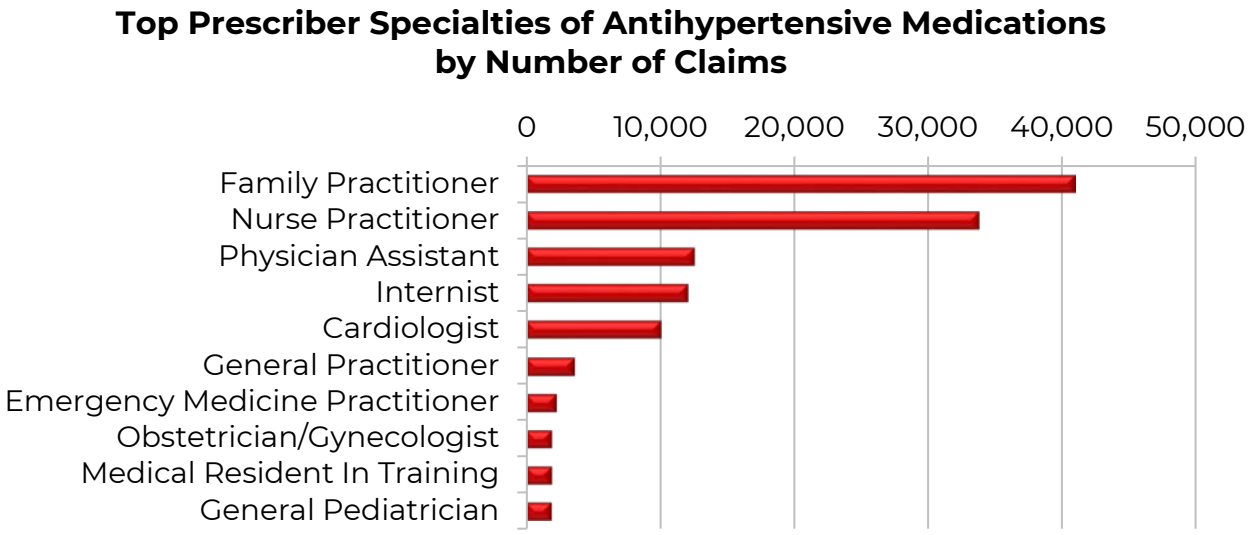
Utilization of Antihypertensive Medications: Calendar Year 2020

Comparison of Calendar Years

Calendar Year	*Total Members	Total Claims	Total Cost	Cost/ Claim	Cost/ Day	Total Units	Total Days
2019	29,391	128,581	$2,082,216.83	$16.19	$0.33	7,254,198	6,396,009
2020	30,038	130,511	$2,378,512.31	$18.22	$0.34	7,990,610	7,003,342
% Change	**2.2%**	**1.5%**	**14.2%**	**12.5%**	**3.0%**	**10.2%**	**9.5%**
Change	**647**	**1,930**	**$296,295.48**	**$2.03**	**$0.01**	**736,412**	**607,333**

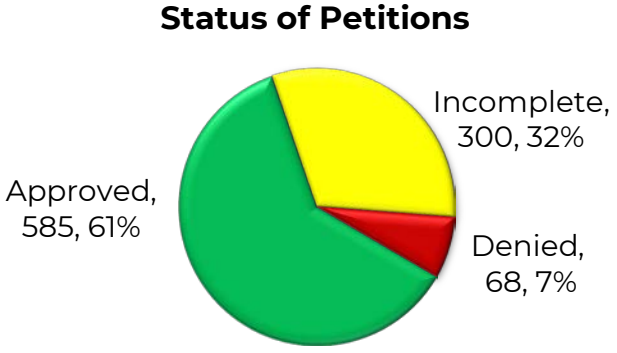
*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.





Prior Authorization of Antihypertensive Medications

There were 953 prior authorization requests submitted for antihypertensive medications during calendar year 2020. The following chart shows the status of the submitted petitions for calendar year 2020.



Market News and Updates[1,2,3,4,5]

Anticipated Patent Expiration(s):

- Tekturna® (aliskiren tablet): August 2026
- Edarbi® (azilsartan tablet): March 2028
- Tekturna HCT® [aliskiren/hydrochlorothiazide (HCTZ) tablet]: July 2028
- Hemangeol® (propranolol hydrochloride oral solution): October 2028
- Prestalia® (perindopril/amlodipine tablet): October 2029
- Consensi® (amlodipine/celecoxib tablet): February 2030
- Edarbyclor® (azilsartan/chlorthalidone tablet): July 2031
- Kapspargo Sprinkle™ [metoprolol succinate extended-release (ER) capsule]: July 2035
- Sotylize® (sotalol oral solution): August 2035
- Qbrelis® (lisinopril oral solution): November 2035
- Epaned® (enalapril oral solution): March 2036
- CaroSpir® (spironolactone oral suspension): October 2036
- Nymalize® (nimodipine oral solution): April 2038
- Katerzia® (amlodipine oral suspension): April 2039

News:

- **May 2020:** In a recent report published in the *Annals of Internal Medicine*, 16-22% of patients with hypertension (HTN) appeared to have primary aldosteronism as the most likely cause. These findings could potentially change how some patients with HTN are screened and managed. Treatment with a mineralocorticoid reception antagonist (MRA) may be the best treatment options for these patients. There are already 2 MRA medications on the market, spironolactone and eplerenone, but some prescribers may not want to use these medications due to the risk of hyperkalemia. Finerenone, an investigational MRA, has been suggested to have less risk of hyperkalemia than spironolactone and eplerenone and could be a possible treatment option for HTN due to primary aldosteronism. Finerenone is currently in a Phase 3 study evaluating the effectiveness of reducing kidney failure and disease progression in diabetic kidney disease.
- **July 2020:** In an observational analysis of more than 13,000 patients with acute coronary syndrome (ACS) and no history of cardiovascular (CV) disease, women in the study who had taken beta blockers for HTN showed about a one-third increased risk for heart failure (HF) at the time of their ACS presentation. The authors of the study suggested that beta blockers taken for HTN may predispose women to worse outcomes, when compared to men, when they present with ACS. The difference between women and men was especially pronounced among patients with ST-segment-elevation MI (STEMI), compared with those with a non-ST-segment-elevation MI (NSTEMI). The analysis raises

strong concerns about the appropriate role of beta blockers in the treatment of HTN in women with no prior history of CV disease. Beta blocker use may be an acute precipitant of HF in women presenting with incident MI. The authors suggest that discontinuing a beta blocker in an otherwise healthy woman with HTN and no prior CV disease is not harmful and could be beneficial since there are other medications that could be used. Since the analysis was observational, additional studies are needed to confirm this association of beta blockers and worse outcomes in female patients with HTN and ACS.

Pipeline:

- **Firibastat:** Quantum Genomics is currently developing a new class of centrally acting drugs called brain aminopeptidase A inhibitors (BAPAIs) for the treatment of HTN and prevention of related CV risks such as HF. Firibastat is a prodrug that is a selective inhibitor of aminopeptidase A, which prevents the production of angiotensin III in the brain. A decrease in angiotensin III will reduce blood pressure by decreasing the concentration of vasopressin, decreasing the activity of sympathetic neurons associated with vessel vasoconstriction, and inhibiting the baroreflex. Quantum Genomics has launched a Phase 3 study evaluating the effectiveness of firibastat as a treatment for resistant HTN.

Recommendations

The College of Pharmacy recommends moving all strengths of candesartan tablets except the 32mg from Tier-2 to Tier-1 of the Antihypertensive Medications PBPA category based on net costs (changes shown in red):

Angiotensin Receptor Blockers (ARBs) and ARB Combination Products		
Tier-1	**Tier-2**	**Special PA**
candesartan (Atacand®)*	candesartan **32mg** (Atacand®)	azilsartan (Edarbi®)
irbesartan (Avapro®)	olmesartan/amlodipine/HCTZ (Tribenzor®)	azilsartan/chlorthalidone (Edarbyclor®)
irbesartan/HCTZ (Avalide®)	telmisartan/HCTZ (Micardis® HCT)	candesartan/HCTZ (Atacand® HCT)
losartan (Cozaar®)		eprosartan (Teveten®)
losartan/HCTZ (Hyzaar®)		eprosartan/HCTZ (Teveten® HCT)
olmesartan (Benicar®)		telmisartan/amlodipine (Twynsta®)
olmesartan/amlodipine (Azor®)		
olmesartan/HCTZ (Benicar HCT®)		

Angiotensin Receptor Blockers (ARBs) and ARB Combination Products		
Tier-1	**Tier-2**	**Special PA**
telmisartan (Micardis®)		
valsartan (Diovan®)		
valsartan/amlodipine (Exforge®)		
valsartan/amlodipine/HCTZ (Exforge® HCT)		
valsartan/HCTZ (Diovan HCT®)		

***All strengths other than 32mg.**
HCTZ = hydrochlorothiazide

Utilization Details of Antihypertensive Medications: Calendar Year 2020

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
ANGIOTENSIN I CONVERTING ENZYME INHIBITORS (ACEIs)					
TIER-1 UTILIZATION					
LISINOPRIL TAB 20MG	14,811	4,837	$145,182.45	$9.80	3.06
LISINOPRIL TAB 10MG	14,226	4,857	$134,339.54	$9.44	2.93
LISINOPRIL TAB 40MG	7,474	2,219	$88,331.13	$11.82	3.37
LISINOPRIL TAB 5MG	6,586	2,134	$63,278.00	$9.61	3.09
LISINOPRIL TAB 2.5MG	3,139	959	$30,646.57	$9.76	3.27
LISINOPRIL TAB 30MG	1,005	305	$11,004.09	$10.95	3.3
ENALAPRIL TAB 2.5MG	728	137	$12,715.79	$17.47	5.31
ENALAPRIL TAB 5MG	702	151	$13,732.74	$19.56	4.65
ENALAPRIL TAB 10MG	670	162	$13,363.41	$19.95	4.14
ENALAPRIL TAB 20MG	634	162	$14,404.00	$22.72	3.91
BENAZEPRIL TAB 20MG	258	74	$2,747.60	$10.65	3.49
BENAZEPRIL TAB 10MG	183	43	$2,128.05	$11.63	4.26
BENAZEPRIL TAB 40MG	170	48	$1,763.66	$10.37	3.54
RAMIPRIL CAP 10MG	103	29	$1,128.42	$10.96	3.55
QUINAPRIL TAB 40MG	73	17	$1,133.99	$15.53	4.29
QUINAPRIL TAB 20MG	68	14	$963.27	$14.17	4.86
RAMIPRIL CAP 5MG	67	21	$609.56	$9.10	3.19
RAMIPRIL CAP 1.25MG	51	12	$629.60	$12.35	4.25
BENAZEPRIL TAB 5MG	47	11	$531.44	$11.31	4.27
RAMIPRIL CAP 2.5MG	38	10	$439.20	$11.56	3.8
FOSINOPRIL TAB 10MG	25	9	$391.33	$15.65	2.78
FOSINOPRIL TAB 20MG	21	5	$352.74	$16.80	4.2
QUINAPRIL TAB 10MG	19	7	$282.95	$14.89	2.71
FOSINOPRIL TAB 40MG	18	3	$315.54	$17.53	6
MOEXIPRIL TAB 15MG	8	2	$399.37	$49.92	4
PERINDOPRIL TAB 4MG	5	1	$153.87	$30.77	5
QUINAPRIL TAB 5MG	5	2	$85.55	$17.11	2.5

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
TIER-1 SUBTOTAL	**51,134**	**16,231**	**$541,053.86**	**$10.58**	**3.15**
TIER-2 UTILIZATION					
CAPTOPRIL TAB 25MG	105	19	$5,718.08	$54.46	5.53
CAPTOPRIL TAB 50MG	69	11	$6,079.02	$88.10	6.27
CAPTOPRIL TAB 12.5MG	12	5	$626.09	$52.17	2.4
CAPTOPRIL TAB 100MG	1	1	$95.37	$95.37	1
TIER-2 SUBTOTAL	**187**	**36**	**$12,518.56**	**$66.94**	**5.19**
SPECIAL PRIOR AUTHORIZATION (PA) UTILIZATION					
EPANED SOL 1MG/ML	1,389	255	$451,128.08	$324.79	5.45
QBRELIS SOL 1MG/ML	79	18	$39,025.63	$494.00	4.39
SPECIAL PA SUBTOTAL	**1,468**	**273**	**$490,153.71**	**$333.89**	**5.38**
ACEI TOTAL	**52,789**	**16,540**	**$1,043,726.13**	**$19.77**	**3.19**
CALCIUM CHANNEL BLOCKERS (CCBs)					
TIER-1 UTILIZATION					
AMLODIPINE TAB 10MG	15,363	4,746	$155,244.39	$10.11	3.24
AMLODIPINE TAB 5MG	11,953	3,981	$117,763.63	$9.85	3
AMLODIPINE TAB 2.5MG	1,791	615	$18,088.70	$10.10	2.91
NIFEDIPINE TAB 30MG ER	1,262	686	$25,681.74	$20.35	1.84
NIFEDIPINE TAB 60MG ER	619	283	$14,076.86	$22.74	2.19
NIFEDIPINE TAB 30MG ER	487	258	$9,172.96	$18.84	1.89
NIFEDIPINE CAP 10MG	434	325	$13,348.00	$30.76	1.34
DILTIAZEM CAP 120MG ER	428	163	$8,528.44	$19.93	2.63
DILTIAZEM CAP 240MG ER	426	123	$9,664.52	$22.69	3.46
NIFEDIPINE TAB 60MG ER	356	151	$8,740.58	$24.55	2.36
DILTIAZEM CAP 180MG ER	300	110	$6,803.06	$22.68	2.73
VERAPAMIL TAB 240MG ER	300	75	$5,633.74	$18.78	4
NIFEDIPINE TAB 90MG ER	250	85	$7,595.65	$30.38	2.94
VERAPAMIL TAB 120MG ER	242	78	$5,461.24	$22.57	3.1
CARTIA XT CAP 180MG/24HR	232	70	$5,273.23	$22.73	3.31
DILTIAZEM TAB 30MG	214	68	$3,661.93	$17.11	3.15
CARTIA XT CAP 240MG/24HR	189	72	$4,485.20	$23.73	2.63
DILTIAZEM TAB 60MG	183	59	$3,928.46	$21.47	3.1
DILTIAZEM TAB 120MG	178	45	$4,069.15	$22.86	3.96
NIFEDIPINE TAB 90MG ER	173	57	$4,282.05	$24.75	3.04
CARTIA XT CAP 120MG/24HR	162	68	$3,330.66	$20.56	2.38
VERAPAMIL TAB 180MG ER	159	55	$3,056.50	$19.22	2.89
VERAPAMIL TAB 80MG	131	51	$1,652.66	$12.62	2.57
VERAPAMIL TAB 40MG	127	36	$2,504.93	$19.72	3.53
VERAPAMIL TAB 120MG	116	30	$1,682.70	$14.51	3.87
DILTIAZEM CAP 120MG/24HR	114	44	$2,313.61	$20.29	2.59
DILTIAZEM TAB 90MG	97	21	$2,367.92	$24.41	4.62
DILTIAZEM CAP 360MG ER	83	26	$2,989.91	$36.02	3.19
DILT-XR CAP 180MG	82	19	$2,366.36	$28.86	4.32

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
DILT-XR CAP 240MG	81	27	$3,143.59	$38.81	3
NIFEDIPINE CAP 20MG	79	48	$6,276.79	$79.45	1.65
DILTIAZEM CAP 240MG/24HR	71	24	$2,686.28	$37.83	2.96
DILTIAZEM CAP 300MG ER	67	16	$1,939.35	$28.95	4.19
DILT-XR CAP 120MG	58	21	$1,685.95	$29.07	2.76
DILTIAZEM CAP 180MG/24HR	49	20	$1,445.35	$29.50	2.45
CARTIA XT CAP 300MG/24HR	32	11	$1,185.21	$37.04	2.91
FELODIPINE TAB 5MG ER	23	5	$476.90	$20.73	4.6
DILTIAZEM CAP 300MG ER	15	3	$543.53	$36.24	5
DILTIAZEM CAP 420MG/24HR	9	3	$567.94	$63.10	3
FELODIPINE TAB 10MG ER	8	2	$153.42	$19.18	4
NIMODIPINE CAP 30MG	6	4	$3,797.35	$632.89	1.5
FELODIPINE TAB 2.5MG ER	4	1	$62.28	$15.57	4
DILTIAZEM CAP 240MG ER	2	1	$52.87	$26.44	2
TIADYLT CAP 120MG/24HR	1	1	$28.36	$28.36	1
TIER-1 SUBTOTAL	**36,956**	**12,587**	**$477,813.95**	**$12.93**	**2.94**
TIER-2 UTILIZATION					
VERAPAMIL CAP 180MG SR	53	12	$4,439.08	$83.76	4.42
VERAPAMIL CAP 240MG SR	51	14	$4,612.69	$90.44	3.64
VERAPAMIL CAP 120MG SR	41	9	$2,561.41	$62.47	4.56
VERAPAMIL CAP 360MG SR	37	9	$7,696.98	$208.03	4.11
AMLOD/ATORV TAB 5-40MG	22	5	$5,937.77	$269.90	4.4
DILTIAZEM TAB 180MG ER	22	5	$2,104.47	$95.66	4.4
DILTIAZEM CAP 60MG ER	17	3	$2,735.12	$160.89	5.67
DILTIAZEM TAB 240MG ER	15	8	$2,710.30	$180.69	1.88
DILTIAZEM CAP 120MG ER	14	5	$2,454.68	$175.33	2.8
AMLOD/ATORV TAB 10-40MG	12	2	$2,094.50	$174.54	6
AMLOD/ATORV TAB 5-20MG	12	2	$2,359.68	$196.64	6
MATZIM LA TAB 420MG/24HR	12	1	$1,440.51	$120.04	12
VERAPAMIL CAP 120MG ER	12	5	$663.45	$55.29	2.4
AMLOD/ATORV TAB 10-20MG	11	4	$2,586.86	$235.17	2.75
AMLOD/ATORV TAB 10-80MG	11	3	$2,941.58	$267.42	3.67
VERAPAMIL CAP 240MG ER	10	6	$1,049.32	$104.93	1.67
DILTIAZEM TAB 360MG ER	9	4	$1,795.39	$199.49	2.25
MATZIM LA TAB 300MG/24HR	8	1	$785.44	$98.18	8
VERAPAMIL CAP 200MG ER	7	1	$549.58	$78.51	7
AMLOD/ATORV TAB 10-10MG	6	2	$1,695.84	$282.64	3
VERAPAMIL CAP 180MG ER	6	2	$642.41	$107.07	3
DILTIAZEM CAP 90MG ER	5	2	$443.71	$88.74	2.5
CARDIZEM LA TAB 120MG	5	3	$811.84	$162.37	1.67
MATZIM LA TAB 240MG/24HR	5	2	$978.03	$195.61	2.5
AMLOD/ATORV TAB 5-10MG	4	1	$958.88	$239.72	4
MATZIM LA TAB 180MG/24HR	3	1	$537.28	$179.09	3

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
AMLOD/ATORV TAB 2.5-20MG	2	1	$1,028.32	$514.16	2
NICARDIPINE CAP 30MG	2	1	$188.99	$94.50	2
MATZIM LA TAB 360MG/24HR	2	1	$205.84	$102.92	2
TIER-2 SUBTOTAL	**416**	**115**	**$59,009.95**	**$141.85**	**3.62**
SPECIAL PA UTILIZATION					
KATERZIA SUS 1MG/ML	152	42	$62,628.23	$412.03	3.62
DILTIAZEM CAP 360MG CD	5	2	$915.31	$183.06	2.5
SPECIAL PA SUBTOTAL	**157**	**44**	**$63,543.54**	**$404.74**	**3.57**
CCB TOTAL	**37,529**	**12,746**	**$600,367.44**	**$16.00**	**2.94**
ANGIOTENSIN II RECEPTOR BLOCKERS (ARBs) AND ARB COMBINATION PRODUCTS					
TIER-1 UTILIZATION					
LOSARTAN POT TAB 50MG	5,288	1,752	$66,455.95	$12.57	3.02
LOSARTAN POT TAB 100MG	4,616	1,444	$61,911.29	$13.41	3.2
LOSARTAN POT TAB 25MG	3,337	1,141	$38,236.45	$11.46	2.92
LOSARTAN/HCTZ TAB 100-25MG	641	239	$9,948.97	$15.52	2.68
LOSARTAN/HCTZ TAB 50-12.5MG	514	211	$6,377.25	$12.41	2.44
LOSARTAN/HCTZ TAB 100-12.5MG	371	130	$5,136.82	$13.85	2.85
OLMESARTAN MEDOX TAB 20MG	342	115	$4,960.21	$14.50	2.97
OLMESARTAN MEDOX TAB 40MG	318	106	$4,760.11	$14.97	3
VALSARTAN TAB 160MG	233	78	$5,746.59	$24.66	2.99
IRBESARTAN TAB 150MG	222	66	$4,603.27	$20.74	3.36
VALSARTAN TAB 80MG	217	71	$4,433.16	$20.43	3.06
IRBESARTAN TAB 300MG	173	39	$3,081.22	$17.81	4.44
TELMISARTAN TAB 40MG	129	47	$4,656.81	$36.10	2.74
IRBESARTAN TAB 75MG	126	25	$2,193.65	$17.41	5.04
TELMISARTAN TAB 80MG	123	41	$3,958.08	$32.18	3
VALSARTAN/HCTZ TAB 160-25MG	111	31	$1,731.20	$15.60	3.58
VALSARTAN/HCTZ TAB 320-25MG	111	30	$2,333.35	$21.02	3.7
VALSARTAN TAB 320MG	102	35	$3,108.48	$30.48	2.91
VALSARTAN TAB 40MG	97	37	$2,027.23	$20.90	2.62
TELMISARTAN TAB 20MG	89	22	$2,267.12	$25.47	4.05
OLMESARTAN/HCTZ TAB 40-25MG	87	30	$1,442.28	$16.58	2.9
VALSARTAN/HCTZ TAB 160-12.5MG	84	30	$1,752.17	$20.86	2.8
VALSARTAN/HCTZ TAB 80-12.5MG	83	25	$1,799.23	$21.68	3.32
OLMESARTAN /HCTZ TAB 20-12.5MG	75	32	$1,132.81	$15.10	2.34
IRBESARTAN/HCTZ TAB 150-12.5MG	68	22	$1,624.24	$23.89	3.09
IRBESARTAN/HCTZ TAB 300-12.5MG	64	17	$1,660.90	$25.95	3.76
OLMESARTAN/HCTZ TAB 40-12.5MG	62	26	$1,664.88	$26.85	2.38
AMLOD/VALSARTAN TAB 10-320MG	61	14	$1,939.70	$31.80	4.36
VALSARTAN/HCTZ TAB 320-12.5MG	47	17	$1,063.92	$22.64	2.76
OLMESARTAN MEDOX TAB 5MG	31	11	$425.10	$13.71	2.82
AMLOD/VALSARTAN TAB 10-160MG	27	7	$752.64	$27.88	3.86
AMLOD/VALSARTAN TAB 5-160MG	22	8	$628.55	$28.57	2.75

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
AMLOD/OLM TAB 10-40MG	18	7	$672.98	$37.39	2.57
AMLOD/OLM TAB 5-20MG	17	3	$411.02	$24.18	5.67
AMLOD/OLM TAB 10-20MG	13	5	$416.13	$32.01	2.6
AMLOD/VALSARTAN TAB 5-320MG	12	1	$217.88	$18.16	12
EXFORGE HCT 10-160-25MG	10	1	$3,110.50	$311.05	10
AMLOD/VALSAR/HCTZ 10-160-25MG	10	1	$394.32	$39.43	10
AMLOD/OLM TAB 5-40MG	10	3	$440.70	$44.07	3.33
COZAAR TAB 50MG	9	1	$1,508.96	$167.66	9
EXFORGE HCT 5-160-12.5MG	6	1	$1,630.69	$271.78	6
EXFORGE HCT 5-160-25MG	6	1	$1,630.39	$271.73	6
EXFORGE HCT 10-320-25MG	5	1	$994.35	$198.87	5
DIOVAN TAB 160MG	5	1	$2,712.09	$542.42	5
BENICAR TAB 40MG	3	1	$2,787.60	$929.20	3
DIOVAN TAB 320MG	2	1	$1,868.24	$934.12	2
MICARDIS TAB 40MG	1	1	$628.77	$628.77	1
MICARDIS TAB 80MG	1	1	$629.09	$629.09	1
TIER-1 SUBTOTAL	**17,999**	**5,929**	**$273,867.34**	**$15.22**	**3.04**
TIER-2 UTILIZATION					
CANDESARTAN TAB 8MG	67	16	$2,922.27	$43.62	4.19
CANDESARTAN TAB 16MG	45	12	$1,750.70	$38.90	3.75
TELMISARTAN/HCTZ TAB 80-12.5MG	44	9	$2,824.90	$64.20	4.89
TELMISARTAN/HCTZ TAB 40-12.5MG	30	7	$1,526.34	$50.88	4.29
CANDESARTAN TAB 4MG	25	9	$813.43	$32.54	2.78
CANDESARTAN TAB 32MG	22	8	$1,555.74	$70.72	2.75
TELMISARTAN/HCTZ TAB 80-25MG	18	6	$1,564.63	$86.92	3
OLM/AMLOD/HCTZ 20-5-12.5MG	16	2	$1,049.22	$65.58	8
OLM/AMLOD/HCTZ 40-10-25MG	15	4	$1,642.78	$109.52	3.75
OLM/AMLOD/HCTZ 40-5-25MG	10	3	$1,282.99	$128.30	3.33
TIER-2 SUBTOTAL	**292**	**76**	**$16,933.00**	**$57.99**	**3.84**
SPECIAL PA UTILIZATION					
EDARBYCLOR TAB 40-12.5MG	14	3	$5,132.38	$366.60	4.67
EDARBYCLOR TAB 40-25MG	8	3	$1,617.80	$202.23	2.67
EDARBI TAB 40MG	6	1	$1,198.32	$199.72	6
EDARBI TAB 80MG	5	2	$3,121.00	$624.20	2.5
CANDESAR/HCTZ TAB 16-12.5MG	2	1	$320.68	$160.34	2
SPECIAL PA SUBTOTAL	**35**	**10**	**$11,390.18**	**$325.43**	**3.5**
ARB TOTAL	**18,326**	**6,015**	**$302,190.52**	**$16.49**	**3.05**
ACEI/HYDROCHLOROTHIAZIDE (HCTZ) COMBINATION PRODUCTS					
TIER-1 UTILIZATION					
LISINOPRIL/HCTZ TAB 20-25MG	3,742	1,259	$39,604.24	$10.58	2.97
LISINOPRIL/HCTZ TAB 20-12.5MG	3,741	1,226	$43,414.33	$11.61	3.05
LISINOPRIL/HCTZ TAB 10-12.5MG	2,221	784	$23,661.26	$10.65	2.83
ENALAPRIL/HCTZ TAB 10-25MG	84	26	$1,678.91	$19.99	3.23

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
BENAZEPRIL/HCTZ TAB 10-12.5MG	54	18	$2,582.86	$47.83	3
ENALAPRIL/HCTZ TAB 5-12.5MG	43	7	$789.03	$18.35	6.14
BENAZEPRIL/HCTZ TAB 20-12.5MG	30	9	$1,351.95	$45.07	3.33
BENAZEPRIL/HCTZ TAB 20-25MG	30	9	$1,607.05	$53.57	3.33
QUINAPRIL/HCTZ TAB 20-12.5MG	10	1	$270.02	$27.00	10
QUINAPRIL/HCTZ TAB 10-12.5MG	6	1	$151.99	$25.33	6
BENAZEPRIL/HCTZ TAB 5-6.25MG	4	1	$314.32	$78.58	4
QUINAPRIL/HCTZ TAB 20-25MG	4	1	$135.57	$33.89	4
TIER-1 SUBTOTAL	**9,969**	**3,342**	**$115,561.53**	**$11.59**	**2.98**
TIER-2 UTILIZATION					
CAPTOPRIL/HCTZ TAB 50-25MG	1	1	$107.70	$107.70	1
CAPTOPRIL/HCTZ TAB 25-15MG	1	1	$83.91	$83.91	1
TIER-2 SUBTOTAL	**2**	**2**	**$ 191.61**	**$95.81**	**1**
ACEI/HCTZ TOTAL	**9,971**	**3,344**	**$115,753.14**	**$11.61**	**2.98**
SPIRONOLACTONE PRODUCTS					
NO PA REQUIRED					
SPIRONOLACTONE TAB 100MG	1,370	442	$23,719.23	$17.31	3.1
SPIRONOLACTONE TAB 25MG	5,129	1,556	$62,750.69	$12.23	3.3
SPIRONOLACTONE TAB 50MG	2,415	845	$39,745.90	$16.46	2.86
SUBTOTAL	**8,914**	**2,843**	**$126,215.82**	**$14.16**	**3.14**
SPECIAL PA UTILIZATION					
CAROSPIR SUS 25MG/5ML	221	59	$70,485.38	$318.94	3.75
SPECIAL PA SUBTOTAL	**221**	**59**	**$70,485.38**	**$318.94**	**3.75**
SPIRONOLACTONE TOTAL	**9,135**	**2,902**	**$196,701.20**	**$21.53**	**3.15**
PROPRANOLOL SOLUTION PRODUCTS					
NO PA REQUIRED					
PROPRANOLOL SOL 20MG/5ML	907	219	$20,205.93	$22.28	4.14
PROPRANOLOL SOL 40MG/5ML	42	11	$1,303.93	$31.05	3.82
SUBTOTAL	**949**	**230**	**$21,509.86**	**$22.67**	**4.13**
SPECIAL PA UTILIZATION					
HEMANGEOL SOL 4.28MG/ML	62	17	$37,184.85	$599.76	3.65
SPECIAL PA SUBTOTAL	**62**	**17**	**$37,184.85**		**3.65**
PROPRANOLOL TOTAL	**1,011**	**247**	**$58,694.71**	**$58.06**	**4.09**
MISCELLANEOUS (MISC) COMBINATION PRODUCTS					
NO PA REQUIRED					
BISOPRL/HCTZ TAB 5-6.25MG	160	43	$4,406.20	$27.54	3.72
BISOPRL/HCTZ TAB 10-6.25MG	146	36	$3,245.90	$22.23	4.06
ATENOL/CHLOR TAB 50-25MG	136	36	$3,589.39	$26.39	3.78
ATENOL/CHLOR TAB 100-25MG	93	22	$3,595.93	$38.67	4.23
METOPRL/HCTZ TAB 50-25MG	80	23	$4,877.33	$60.97	3.48
BISOPRL/HCTZ TAB 2.5-6.25MG	70	22	$1,705.90	$24.37	3.18
METOPRL/HCTZ TAB 100-25MG	16	10	$1,565.71	$97.86	1.6
PROPRAN/HCTZ TAB 80-25MG	3	1	$282.02	$94.01	3

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
SUBTOTAL	**704**	**193**	**$23,268.38**	**$33.05**	**3.65**
MISC TOTAL	**704**	**193**	**$23,268.38**	**$33.05**	**3.65**
ACEI/CCB COMBINATION PRODUCTS					
TIER-1 UTILIZATION					
AMLOD/BENAZP CAP 10-20MG	212	70	$3,367.62	$15.89	3.03
AMLOD/BENAZP CAP 10-40MG	197	62	$3,340.20	$16.96	3.18
AMLOD/BENAZP CAP 5-20MG	132	36	$1,899.97	$14.39	3.67
AMLOD/BENAZP CAP 5-10MG	65	26	$984.84	$15.15	2.5
AMLOD/BENAZP CAP 5-40MG	33	14	$624.67	$18.93	2.36
AMLOD/BENAZP CAP 2.5-10MG	10	3	$147.42	$14.74	3.33
TIER-1 SUBTOTAL	**649**	**211**	**$10,364.72**	**$15.97**	**3.08**
ACEI/CCB TOTAL	**649**	**211**	**$10,364.72**	**$15.97**	**3.08**
SOTALOL PRODUCTS					
NO PA REQUIRED					
SOTALOL HCL TAB 80MG	235	50	$3,663.56	$15.59	4.7
SOTALOL HCL TAB 120MG	84	13	$1,308.29	$15.57	6.46
SOTALOL AF TAB 80MG	22	5	$329.13	$14.96	4.4
SOTALOL HCL TAB 160MG	14	4	$302.01	$21.57	3.5
SOTALOL AF TAB 120MG	1	1	$16.28	$16.28	1
SUBTOTAL	**356**	**73**	**$5,619.27**	**$15.78**	**4.88**
SPECIAL PA UTILIZATION					
SOTYLIZE SOL 5MG/ML	39	7	$21,411.96	$549.02	5.57
SPECIAL PA SUBOTAL	**39**	**7**	**$21,411.96**	**$549.02**	**5.57**
SOTALOL TOTAL	**395**	**80**	**$27,031.23**	**$68.43**	**4.94**
DIRECT RENIN INHIBITORS (DRI) PRODUCTS					
SPECIAL PA UTILIZATION					
TEKTURNA TAB 150MG	2	1	$414.84	$207.42	2.00
SPECIAL PA SUBTOTAL	**2**	**1**	**$414.84**	**$207.42**	**2.00**
DRI TOTAL	**2**	**1**	**$414.84**	**$207.42**	**2.00**
TOTAL	**130,511**	**30,038***	**$2,378,512.31**	**$18.22**	**4.34**

AF = atrial fibrillation; AMLOD = amlodipine; ATENOL/CHLOR = atenolol/chlorthalidone; ATORV = atorvastatin; BENAZP = benazepril; BISOPRL = bisoprolol; CANDESAR = candesartan; CAP = capsule; CD = controlled-delivery; ER = extended-release; HCL = hydrochloride; HR = hour; LA = long-acting; MEDOX = medoxomil; METOPRL = metoprolol, OLM = olmesartan; POT = potassium; PROPRAN = propranolol; SOL = solution; SR = sustained-release; SUS = suspension; TAB = tablet; VALSAR = valsartan; XR = extra-release; XT = extra-time
*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

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Appendix K

Calendar Year 2020 Annual Review of Lung Cancer Medications and 30-Day Notice to Prior Authorize Cosela™ (Trilaciclib), Gavreto™ (Pralsetinib), Retevmo® (Selpercatinib), Tabrecta™ (Capmatinib), Tepmetko® (Tepotinib), and Zepzelca™ (Lurbinectedin)

Oklahoma Health Care Authority
April 2021

Introduction[1,2,3]

The American Cancer Society estimates approximately 235,760 new lung cancer cases will be diagnosed in 2021. Lung cancer is the leading cause of cancer death, accounting for approximately 25% of all cancer-related deaths among both males and females. Lung cancer is most commonly diagnosed in older individuals with the average age at diagnosis being 70 years. Over 95% of all lung cancer cases are classified as either small cell lung cancer (SCLC) or non-small cell lung cancer (NSCLC). Defining the cell type is essential, as the prognosis and treatment of the 2 types differ substantially. NSCLC is more common than SCLC, with NSCLC accounting for approximately 84% of all lung cancer diagnoses. There are many subtypes of NSCLC including adenocarcinomas, squamous cell carcinomas, and large cell carcinomas. Each subtype falls under the broad term of NSCLC, as the approach to initial treatment of localized disease is similar among the subtypes.

In advanced stages, treatment decisions are guided by the stage of the disease, histology, and molecular features of the tumor. Patient-specific factors, such as performance status and comorbid conditions, are also considered when determining treatment plans. Surgical resection provides the best chance for cure in patients with Stage I to II NSCLC and can be used in combination with cisplatin-based systemic chemotherapy and radiation. Chemotherapy or immunotherapy are the treatments of choice for Stage III to IV NSCLC. The role of molecularly targeted-therapy and immunotherapy has become part of standard-of-care treatment plans in select patients with NSCLC. SCLC differs in that there is no role for surgery in the treatment of this histology. Chemotherapy and radiation are the treatments of choice for SCLC, and immunotherapy is now an option for SCLC extensive-stage disease.

Current Prior Authorization Criteria

Criteria for Keytruda® (pembrolizumab), Mekinist® (trametinib), Opdivo® (nivolumab), Tafinlar® (dabrafenib), Yervoy® (ipilimumab), and Zelboraf®

(vemurafenib) for indications other than lung cancer diagnoses can be found in the December 2020 Drug Utilization Review (DUR) Board packet. These medications and criteria are reviewed annually with the skin cancer medications.

Alecensa® (Alectinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of recurrent or metastatic NSCLC; and
2. Anaplastic lymphoma kinase (ALK) positivity; and
3. First-line or recurrent setting; and
4. As a single-agent only.

Alunbrig® (Brigatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Anaplastic lymphoma kinase (ALK) positivity; and
3. Progressed on or intolerant to crizotinib; and
4. As a single-agent only.

Cyramza® (Ramucirumab) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of NSCLC; and
2. Subsequent therapy for metastatic disease after progression; and
3. In combination with docetaxel.

Cyramza® (Ramucirumab) Approval Criteria [Colorectal Cancer Diagnosis]:

1. Diagnosis of colorectal cancer; and
2. Subsequent therapy for metastatic disease after progression on or after prior therapy with bevacizumab, oxaliplatin, and a fluoropyrimidine; and
3. In combination with an irinotecan-based regimen.

Cyramza® (Ramucirumab) Approval Criteria [Esophageal Cancer Diagnosis]:

1. Diagnosis of unresectable, locally advanced, recurrent, or metastatic esophageal or esophagogastric junction adenocarcinoma; and
2. Karnofsky performance score ≥60%; and
3. As a single-agent or in combination with paclitaxel.

Cyramza® (Ramucirumab) Approval Criteria [Gastric Cancer Diagnosis]:

1. Diagnosis of gastric cancer; and
2. Member is not a surgical candidate or has unresectable, locally advanced, recurrent, or metastatic disease; and
3. Karnofsky performance score ≥60%; and
4. As a single-agent or in combination with paclitaxel.

Cyramza® (Ramucirumab) Approval Criteria [Hepatocellular Carcinoma (HCC) Diagnosis]:

1. Diagnosis of HCC; and
2. Second-line or greater therapy; and
3. Previously failed sorafenib; and
4. Alpha-fetoprotein concentration ≥400ng/mL; and
5. As a single-agent.

Gilotrif® (Afatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

For first-line therapy:

1. Diagnosis of metastatic NSCLC; and
2. Epidermal growth factor receptor (EGFR) mutation detected; and
3. As a single-agent only.

For second-line therapy:

1. Diagnosis of metastatic NSCLC; and
2. Progressed following platinum-based chemotherapy; and
3. As a single-agent or in combination with cetuximab in members with a known sensitizing EGFR mutation who are T790M negative.

Gilotrif® (Afatinib) Approval Criteria [Head and Neck Cancer Diagnosis]:

1. Diagnosis of head and neck cancer; and
2. Disease progression on or after platinum-containing chemotherapy (e.g., cisplatin, carboplatin); and
3. Non-nasopharyngeal cancer must be 1 of the following:
    a. Newly diagnosed T4b, any N, M0 disease, unresectable nodal disease with no metastases, or for members who are unfit for surgery and have a performance status (PS) of 3; or
    b. Metastatic (M1) disease at initial presentation, recurrent/persistent disease with distant metastases, or unresectable locoregional recurrence or second primary with prior radiation therapy (RT) and PS of 0 to 2; or
    c. Unresectable locoregional recurrence without prior RT and PS of 3; and
4. As a single-agent only.

Imfinzi® (Durvalumab) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of stage III NSCLC; and
2. Disease has not progressed following concurrent platinum-based chemotherapy and radiation therapy.

Imfinzi® (Durvalumab) Approval Criteria [Urothelial Carcinoma Diagnosis]:

1. Diagnosis of locally advanced or metastatic urothelial carcinoma; and
2. Progressed on or following platinum-containing chemotherapy.

Keytruda® (Pembrolizumab) Approval Criteria [Metastatic Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Member has not previously failed other programmed death 1 (PD-1) inhibitors [e.g., Opdivo® (nivolumab)]; and
3. Tumor proportion scores for programmed death ligand 1 (PD-L1) expression as follows:
    a. As a single-agent, first-line: ≥1%; or
    b. First-line in combination: no expression required; or
    c. As a single-agent, second-line: ≥1%; and
4. Member meets 1 of the following:
    a. Previously untreated, metastatic squamous NSCLC in combination with carboplatin and either paclitaxel or nab-paclitaxel; or
    b. Previously untreated, metastatic non-squamous NSCLC in combination with pemetrexed and carboplatin; or
    c. New diagnosis as first-line therapy (member has not received chemotherapy to treat disease) if:
        i. Tumor does not express sensitizing epidermal growth factor receptor (EGFR) mutations or anaplastic lymphoma kinase (ALK) translocations; or
    d. As a single-agent for disease progression on or after platinum-containing chemotherapy (e.g., cisplatin, carboplatin):
        i. Members with EGFR-mutation-positive tumors should have disease progression on FDA-approved therapy for these aberrations prior to receiving pembrolizumab. *This does not apply if tumors do not have these mutations*; and
            1. *Examples of drugs for EGFR-mutation-positive tumors: osimertinib, erlotinib, afatinib, or gefitinib; or*
        ii. Members with ALK genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving pembrolizumab. *This does not apply if tumors do not have these mutations*; and
            1. *Examples of drugs for ALK-mutation-positive tumors: crizotinib, ceritinib, or alectinib.*

Keytruda® (Pembrolizumab) Approval Criteria [Nonmetastatic Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of stage III nonmetastatic NSCLC; and
2. Ineligible for surgery or definitive chemoradiation; and
3. Tumor proportion scores for programmed death ligand 1 (PD-L1) expression ≥1%; and
4. Member has not previously failed other programmed death 1 (PD-1) inhibitors [e.g., Opdivo® (nivolumab)].

Keytruda® (Pembrolizumab) Approval Criteria [Small Cell Lung Cancer (SCLC) Diagnosis]:

1. Diagnosis of metastatic SCLC; and
2. Progressed on or following a platinum-based regimen and at least 1 other regimen; and
3. Member has not previously failed other programmed death 1 (PD-1) inhibitors [e.g., Opdivo® (nivolumab)].

Lorbrena® (Lorlatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Tumor expresses anaplastic lymphoma kinase (ALK) translocation; and
3. As a single-agent as second-line therapy following disease progression on either alectinib or ceritinib; or
4. As a single-agent as third-line or greater therapy following disease progression on crizotinib and 1 other ALK inhibitor (i.e., ceritinib, alectinib).

Mekinist® (Trametinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of refractory or metastatic disease; and
2. BRAF V600E or V600K mutation; and
    a. Trametinib is not indicated for wild-type BRAF NSCLC; and
3. In combination with Tafinlar® (dabrafenib).

Opdivo® (Nivolumab) Approval Criteria [Mesothelioma Diagnosis]:

1. Diagnosis of malignant pleural mesothelioma that cannot be surgically removed; and
2. Used as first-line therapy; and
3. Used in combination with Yervoy® (ipilimumab).

Opdivo® (Nivolumab) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. For first-line therapy for recurrent, advanced, or metastatic disease, meeting the following:
    a. No epidermal growth factor receptor (EGFR) or anaplastic lymphoma kinase (ALK) genomic tumor aberrations; and
    b. Used in combination with Yervoy® (ipilimumab); and
    c. Expresses programmed death ligand 1 (PD-L1) ≥1%; or
    d. Given in combination with 2 cycles of platinum-doublet chemotherapy.
2. For second-line therapy for metastatic disease, meeting the following:
    a. Tumor histology is 1 of the following:
        i. Adenocarcinoma; or
        ii. Squamous cell; or

iii. Large cell; and
b. Disease progression on or after platinum-containing chemotherapy (e.g., cisplatin, carboplatin); and
c. The patient has not previously failed other programmed death 1 (PD-1) inhibitors [e.g., Keytruda® (pembrolizumab)]; and
d. Used as a single-agent; and
e. Dose as follows: 240mg every 2 weeks or 480mg every 4 weeks.

The review of Opdivo® (nivolumab) for the indications of malignant pleural mesothelioma and NSCLC can be found in the December 2020 DUR Board packet. Opdivo® is reviewed annually with the skin cancer medications.

Opdivo® (Nivolumab) Approval Criteria [Small Cell Lung Cancer (SCLC) Diagnosis]:

1. Diagnosis of SCLC; and
2. Member meets 1 of the following:
   a. Disease relapsed within 6 months of initial chemotherapy; or
   b. Disease progression on initial chemotherapy; and
3. As a single-agent or in combination with Yervoy® (ipilimumab); and
4. Member has not previously failed other programmed death 1 (PD-1) inhibitors [e.g., Keytruda® (pembrolizumab)].

Pemfexy™ (Pemetrexed) Approval Criteria:

1. An FDA approved diagnosis; and
2. A patient-specific, clinically significant reason the member cannot use Alimta® (pemetrexed) must be provided.

Rozlytrek® (Entrectinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. *ROS1*-positive.

Rozlytrek® (Entrectinib) Approval Criteria [Solid Tumor Diagnosis]:

1. Diagnosis of solid tumors; and
2. Member must be 12 years of age or older; and
3. Neurotrophic tyrosine receptor kinase (NTRK) gene fusion without a known acquired resistance mutation; and
4. Metastatic or not a surgical candidate; and
5. Progressed following treatment or have no satisfactory alternative therapy.

Tafinlar® (Dabrafenib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Refractory or metastatic disease; and
2. BRAF V600E or V600K mutation; and
   a. Not indicated for wild-type BRAF NSCLC; and

3. As a single-agent or in combination with Mekinist® (trametinib).

Tagrisso® (Osimertinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Epidermal growth factor receptor (EGFR) T790M mutation-positive disease and following progression on erlotinib, afatinib, or gefitinib for asymptomatic disease, symptomatic brain lesions, or multiple symptomatic systemic lesions; or
3. First-line treatment of members with EGFR exon 19 deletions or exon 21 L858R mutations.

Tarceva® (Erlotinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of NSCLC; and
2. Recurrent or metastatic disease; and
3. Epidermal growth factor receptor (EGFR) mutation detected; and
4. As a single-agent only.

Tarceva® (Erlotinib) Approval Criteria [Pancreatic Cancer Diagnosis]:

1. Diagnosis of pancreatic cancer; and
2. Locally advanced unresectable or metastatic disease; and
3. First-line agent only; and
4. In combination with gemcitabine.

Tarceva® (Erlotinib) Approval Criteria [Kidney Cancer Diagnosis]:

1. Diagnosis of kidney cancer; and
2. Non-clear cell type; and
3. Relapsed disease or surgically unresectable stage IV disease; and
4. As a single-agent only.

Tarceva® (Erlotinib) Approval Criteria [Bone Cancer – Chordoma Diagnosis]:

1. Diagnosis of bone cancer – chordoma; and
2. Recurrent disease; and
3. As a single-agent only.

Tarceva® (Erlotinib) Approval Criteria [Pancreatic Adenocarcinoma Diagnosis]:

1. Diagnosis of pancreatic adenocarcinoma; and
2. Locally advanced, unresectable disease or metastatic disease; and
3. In combination with gemcitabine.

Tecentriq® (Atezolizumab) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. **Diagnosis of Non-Squamous Non-Small Cell Lung Cancer (NSCLC):**
    a. First-line therapy for metastatic disease; and
    b. The member does not have epidermal growth factor receptor (EGFR), anaplastic lymphoma kinase (ALK), *ROS1*, *BRAF*, MET exon 14 skipping, or rearranged during transfection (RET) mutations; and
    c. Used in combination with bevacizumab, paclitaxel, and carboplatin (maximum of 6 cycles) or in combination with paclitaxel (protein bound) and carboplatin; and
    d. Atezolizumab and bevacizumab may be continued after the above combination in members without disease progression (applies to the bevacizumab/paclitaxel/carboplatin regimen); or
2. **Diagnosis of NSCLC:**
    a. For first-line therapy for metastatic disease:
        i. As a single-agent; and
        ii. The member does not have EGFR, ALK, *ROS1*, *BRAF*, MET exon 14 skipping, or RET mutations; and
        iii. High programmed death ligand-1 (PD-L1) expression determined by 1 of the following:
            1. PD-L1 stained ≥50% of tumor cells (TC≥50%); or
            2. PD-L1 stained tumor-infiltrating immune cells (IC) covering ≥10% of the tumor area (IC≥10%); or
    b. For subsequent therapy for metastatic disease:
        i. As a single-agent only.

Tecentriq® (Atezolizumab) Approval Criteria [Small Cell Lung Cancer (SCLC) Diagnosis]:

1. Diagnosis of SCLC; and
2. First-line therapy; and
3. Extensive stage disease; and
4. In combination with carboplatin and etoposide.

Tecentriq® (Atezolizumab) Approval Criteria [Breast Cancer Diagnosis]:

1. Unresectable locally advanced or metastatic triple-negative breast cancer; and
2. In combination with Abraxane® (nab-paclitaxel); and
3. Member must have positive expression of programmed death ligand 1 (PD-L1); and
4. Member has not failed other immunotherapy(ies).

Tecentriq® (Atezolizumab) Approval Criteria [Urothelial Carcinoma Diagnosis]:

1. Diagnosis of locally advanced or metastatic urothelial carcinoma; and

2. Progressed on or following platinum-containing chemotherapy or cisplatin ineligible members.

Vizimpro® (Dacomitinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Member has not received prior epidermal growth factor receptor (EGFR) therapy for metastatic disease; and
3. Members must meet 1 of the following:
    a. EGFR exon 19 deletion; or
    b. Exon 21 L858R substitution mutation.

Xalkori® (Crizotinib) Approval Criteria [Anaplastic Large Cell Lymphoma (ALCL) Diagnosis]:

1. Members 1 to 21 years of age:
    a. Diagnosis of systemic ALCL that is anaplastic lymphoma kinase (ALK)-positive; and
    b. Relapsed or refractory disease; or
2. Members older than 21 years of age:
    a. Diagnosis of systemic ALCL that is ALK-positive; and
    b. Second-line or initial palliative intent therapy and subsequent therapy.

The review of Xalkori® (crizotinib) for the indication of anaplastic large cell lymphoma (ALCL) was included with the lymphoma medications and can be found in the March 2021 DUR Board packet; however, Xalkori® is reviewed annually with the lung cancer medications.

Xalkori® (Crizotinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. First-line or subsequent therapy; and
3. Anaplastic lymphoma kinase (ALK) or *ROS1*-positive; or
4. MET amplification; and
5. As a single-agent only.

Xalkori® (Crizotinib) Approval Criteria [Soft Tissue Sarcoma – Inflammatory Myofibroblastic Tumor (IMT) with Anaplastic Lymphoma Kinase (ALK) Translocation Diagnosis]:

1. Diagnosis of soft tissue sarcoma – IMT; and
2. ALK positivity; and
3. As a single-agent only.

The review and approval criteria for Yervoy® (ipilimumab) for the indications of malignant pleural mesothelioma and NSCLC can be found in the

December 2020 DUR Board packet. Yervoy® is reviewed annually with the skin cancer medications.

Yervoy® (Ipilimumab) Approval Criteria [Mesothelioma Diagnosis]:

1. Diagnosis of malignant pleural mesothelioma that cannot be surgically removed; and
2. Used as first-line therapy; and
3. Used in combination with Opdivo® (nivolumab).

Yervoy® (Ipilimumab) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of recurrent, advanced, or metastatic NSCLC; and
    a. First-line therapy for metastatic disease; and
    b. No epidermal growth factor receptor (EGFR) or anaplastic lymphoma kinase (ALK) genomic tumor aberrations; and
    c. Given in combination with Opdivo® (nivolumab); and
    d. Expresses programmed death ligand 1 (PD-L1) ≥1%; or
    e. Given in combination with 2 cycles of platinum-doublet chemotherapy.

Yervoy® (Ipilimumab) Approval Criteria [Small Cell Lung Cancer (SCLC) Diagnosis]:

1. Diagnosis of SCLC; and
2. Member meets 1 of the following:
    a. Disease relapsed within 6 months of initial chemotherapy; or
    b. Disease is progressive on initial chemotherapy; and
3. In combination with Opdivo® (nivolumab).

Zelboraf® (Vemurafenib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Refractory or metastatic disease; and
2. BRAF V600E or V600K mutation; and
    a. Not indicated for wild-type BRAF NSCLC; and
3. As a single-agent.

Zirabev™ (Bevacizumab-bvzr) Approval Criteria:

1. A patient-specific, clinically significant reason why the member cannot use Avastin® (bevacizumab) must be provided.

Zykadia® (Ceritinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Anaplastic lymphoma kinase (ALK) positivity; and
3. As a single-agent only.

Zykadia® (Ceritinib) Approval Criteria [Soft Tissue Sarcoma – Inflammatory Myofibroblastic Tumor (IMT) with Anaplastic Lymphoma Kinase (ALK) Translocation Diagnosis]:

1. A diagnosis of soft tissue sarcoma – IMT; and
2. ALK positivity; and
3. As a single-agent only.

Utilization of Lung Cancer Medications: Calendar Year 2020

The following utilization data includes medications indicated for lung cancer; however, the data does not differentiate between lung cancer and other diagnoses, for which use may be appropriate.

Calendar Year Comparison: Pharmacy Claims

Calendar Year	*Total Members	Total Claims	Total Cost	Cost/ Claim	Cost/ Day	Total Units	Total Days
2019	12	75	$774,416.37	$10,325.55	$344.19	8,430	2,250
2020	12	51	$539,779.75	$10,583.92	$352.80	3,165	1,530
% Change	**0.00%**	**-32.00%**	**-30.30%**	**2.50%**	**2.50%**	**-62.50%**	**-32.00%**
Change	**0**	**-24**	**-$234,636.62**	**$258.37**	**$8.61**	**-5,265**	**-720**

*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

Calendar Year Comparison: Medical Claims

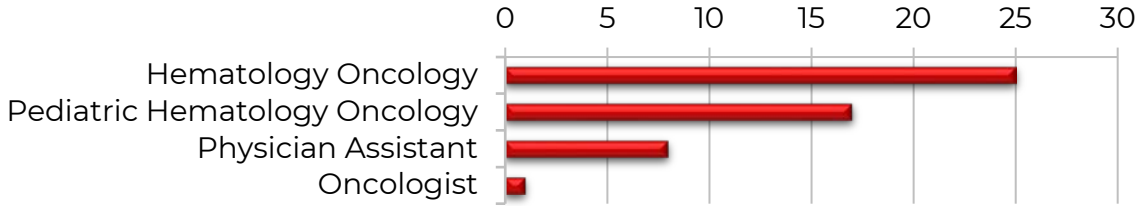
Calendar Year	*Total Members	†Total Claims	Total Cost	Cost/ Claim	Claims/ Member
2019	607	2,099	$11,694,791.98	$5,571.60	3.46
2020	609	2,196	$12,553,905.10	$5,716.71	3.61
% Change	**0.33%**	**4.62%**	**7.35%**	**2.60%**	**4.34%**
Change	**2**	**97**	**$859,113.12**	**$145.11**	**0.15**

*Total number of unduplicated utilizing members.
†Total number of unduplicated claims.
Costs do not reflect rebated prices or net costs.

Demographics of Members Utilizing Lung Cancer Medications: Pharmacy Claims

- Due to the limited number of members utilizing lung cancer medications during calendar year 2020, detailed demographic information could not be provided.

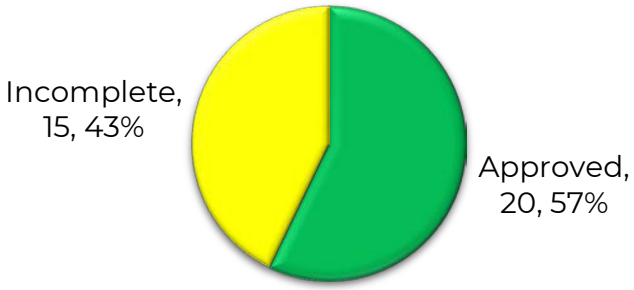
Top Prescriber Specialties of Lung Cancer Medications by Number of Claims: Pharmacy Claims



Prior Authorization of Lung Cancer Medications

There were 35 prior authorization requests submitted for lung cancer medications during calendar year 2020. The following chart shows the status of the submitted petitions for calendar year 2020.

Status of Petitions



Market News and Updates[4,5,6,7,8,9]

New U.S. Food and Drug Administration (FDA) Approval(s) and Indication(s):

- **March 2020:** The FDA approved Imfinzi® (durvalumab) in combination with etoposide and either carboplatin or cisplatin as first-line treatment of patients with extensive-stage SCLC (ES-SCLC).
- **May 2020:** The FDA granted accelerated approval to Tabrecta™ (capmatinib) for adult patients with metastatic NSCLC whose tumors have a mutation that leads to mesenchymal-epithelial transition (MET) exon 14 skipping.
- **May 2020:** The FDA granted accelerated approval to Retevmo® (selpercatinib) for the following indications:
  - Adult patients with metastatic rearranged during transfection (RET) fusion-positive NSCLC; and
  - Adult and pediatric patients 12 years of age and older with advanced or metastatic RET-mutant medullary thyroid cancer (MTC) who require systemic therapy; and

    - Adult and pediatric patients 12 years of age and older with advanced or metastatic RET fusion-positive thyroid cancer who require systemic therapy and who are radioactive iodine-refractory (if radioactive iodine is appropriate).
- **May 2020:** The FDA approved Alunbrig® (brigatinib) for adult patients with anaplastic lymphoma kinase (ALK)-positive metastatic NSCLC.
- **May 2020:** The FDA approved Cyramza® (ramucirumab) in combination with erlotinib for first-line treatment of metastatic NSCLC with epidermal growth factor receptor (EGFR) exon 19 deletions or exon 21 L858R mutations.
- **May 2020:** The FDA approved Tecentriq® (atezolizumab) in combination with bevacizumab for patients with unresectable or metastatic hepatocellular carcinoma (HCC) who have not received prior systemic therapy.
- **June 2020:** The FDA granted accelerated approval to Zepzelca™ (lurbinectedin) for adult patients with metastatic SCLC with disease progression on or after platinum-based chemotherapy.
- **September 2020:** The FDA granted accelerated approval to Gavreto™ (pralsetinib) for adult patients with metastatic RET fusion-positive NSCLC.
- **December 2020:** The FDA approved Gavreto™ (pralsetinib) for adult and pediatric patients 12 years of age and older with advanced or metastatic RET-mutant MTC who require systemic therapy or RET fusion-positive thyroid cancer who require systemic therapy and who are radioactive iodine-refractory (if radioactive iodine is appropriate).
- **December 2020:** The FDA approved Tagrisso® (osimertinib) for adjuvant therapy after tumor resection in patients with NSCLC whose tumors have EGFR exon 19 deletions or exon 21 L858R mutations.
- **February 2021:** The FDA granted accelerated approval to Tepmetko® (tepotinib) for adult patients with metastatic NSCLC harboring MET exon 14 skipping alterations.
- **February 2021:** The FDA approved Libtayo® (cemiplimab-rwlc) as the first immunotherapy indicated for patients with advanced basal cell carcinoma (BCC) previously treated with a hedgehog pathway inhibitor (HHI) or for whom an HHI is not appropriate. Full approval was granted for patients with locally advanced BCC and accelerated approval was granted for patients with metastatic BCC.
- **February 2021:** The FDA approved Cosela™ (trilaciclib) for injection to decrease the incidence of chemotherapy-induced myelosuppression in adult patients when administered prior to a platinum/etoposide-containing regimen or topotecan-containing regimen for ES-SCLC. It is the first and only therapy designed to help protect bone marrow when administered prior to treatment with chemotherapy.

- **February 2021:** The FDA approved Libtayo® (cemiplimab-rwlc) for the first-line treatment of patients with advanced NSCLC (locally advanced who are not candidates for surgical resection or definitive chemoradiation or metastatic) whose tumors have high programmed death ligand 1 (PD-L1) expression [tumor proportion score (TPS) >50%], with no EGFR, ALK, or *ROS1* aberrations.
- **March 2021:** The FDA granted regular approval to Lorbrena® (lorlatinib) for patients with metastatic NSCLC whose tumors are ALK-positive. The FDA previously granted Lorbrena® accelerated approval in November 2018 for the second- or third-line treatment of ALK-positive metastatic NSCLC.
- **March 2021:** The FDA approved Keytruda® (pembrolizumab) in combination with platinum and fluoropyrimidine-based chemotherapy for patients with metastatic or locally advanced esophageal or gastroesophageal (GEJ) (tumors with epicenter 1 to 5 centimeters above the GEJ junction) carcinoma who are not candidates for surgical resection or definitive chemoradiation.

Guideline Update(s):

- Following an FDA approval, the National Comprehensive Cancer Network (NCCN) Compendium guideline recommendations were updated to include use of Tecentriq® (atezolizumab) for advanced, unresectable, or metastatic HCC in combination with Avastin® (bevacizumab) in patients who have not received prior systemic therapy. The IMbrave150 trial showed the Tecentriq®-Avastin® combination reduced the risk of death by 42% and the risk of disease progression or death by 41% compared with Nexavar® (sorafenib).
- Per NCCN Compendium guideline recommendations, Keytruda® (pembrolizumab) can be used for esophageal carcinoma as first-line therapy. In the Phase 3 KEYNOTE-590 trial, Keytruda® plus chemotherapy significantly improved overall survival (OS), progression-free survival (PFS), and objective response rates (ORR) compared with chemotherapy alone as first-line therapy in patients with locally advanced, unresectable, or metastatic esophageal cancer.

News:

- **February 2021:** AstraZeneca announced the voluntary withdrawal of the Imfinzi® (durvalumab) indication in the United States for previously treated adult patients with locally advanced or metastatic bladder cancer. This decision was made in consultation with the FDA based on results from the DANUBE Phase 3 trial in the 1st-line metastatic bladder cancer setting, which did not meet its primary endpoints in 2020. This withdrawal does not impact other approved Imfinzi® indications.

Product Summaries[10,11,12,13,14,15]

Cosela™ (Trilaciclib):

- **Therapeutic Class:** Kinase inhibitor
- **Indication(s):** Decrease the incidence of chemotherapy-induced myelosuppression in adult patients when administered prior to a platinum/etoposide-containing regimen or topotecan-containing regimen for ES-SCLC
- **How Supplied:** 300mg lyophilized powder in single-dose vials (SDVs)
- **Dose:** 240mg/m^2 via intravenous (IV) infusion completed 4 hours prior to the start of chemotherapy each day chemotherapy is administered
- **Cost:** The Wholesale Acquisition Cost (WAC) is $1,417.00 per SDV, resulting in a cost per dose of $2,007.56 based on the recommended dosing for an adult patient 165cm tall and weighing 70kg.

Gavreto™ (Pralsetinib):

- **Therapeutic Class:** Kinase inhibitor
- **Indication(s):**
  - Adult patients with metastatic RET fusion-positive NSCLC
  - Adult and pediatric patients 12 years of age and older with advanced or metastatic RET-mutant MTC who require systemic therapy
  - Adult and pediatric patients 12 years of age and older with advanced or metastatic RET fusion-positive thyroid cancer who require systemic therapy and who are radioactive iodine-refractory (if radioactive iodine is appropriate)
- **How Supplied:** 100mg oral capsules
- **Dose:** 400mg [(4) 100mg capsules] once daily on an empty stomach
- **Cost:** The WAC is $160.36 per 100mg capsule, resulting in a cost of $19,243.20 per 30 days based on the recommended dosing of 400mg daily.

Retevmo® (Selpercatinib):

- **Therapeutic Class:** Kinase inhibitor
- **Indication(s):**
  - Adult patients with metastatic RET fusion-positive NSCLC
  - Adult and pediatric patients 12 years of age and older with advanced or metastatic RET-mutant MTC who require systemic therapy
  - Adult and pediatric patients 12 years of age and older with advanced or metastatic RET fusion-positive thyroid cancer who require systemic therapy and who are radioactive iodine-refractory (if radioactive iodine is appropriate)
- **How Supplied:** 40mg and 80mg oral capsules

- **Dose:**
  - <50kg: 120mg [(3) 40mg capsules] twice daily
  - ≥50kg: 160mg [(2) 80mg capsules] twice daily
- **Cost:** The WAC is $171.67 per 80mg capsule, resulting in a cost of $20,600.40 per 30 days based on the recommended maximum dosing of 160mg twice daily.

Tabrecta™ (Capmatinib):
- **Therapeutic Class:** Kinase inhibitor
- **Indication(s):** Treatment of adult patients with metastatic NSCLC whose tumors have a mutation that leads to MET exon 14 skipping
- **How Supplied:** 150mg and 200mg oral tablets
- **Dose:** 400mg [(2) 200mg tablets] twice daily with or without food; 150mg strength available for dose modification if needed
- **Cost:** The WAC is $169.08 per 200mg tablet, resulting in a cost of $18,936.96 per 28 days based on the recommended dosing of 400mg twice daily.

Tepmetko® (Tepotinib):
- **Therapeutic Class:** Kinase inhibitor
- **Indication(s):** Treatment of adult patients with metastatic NSCLC whose tumors have a mutation that leads to MET exon 14 skipping
- **How Supplied:** 225mg oral tablets
- **Dose:** 450mg [(2) 225mg tablets] once daily with food
- **Cost:** The WAC is $348.31 per 225mg tablet, resulting in a cost of $20,898.60 per 30 days based on the recommended dosing of 450mg once daily.

Zepzelca™ (Lurbinectedin):
- **Therapeutic Class:** Alkylating drug
- **Indication(s):** Treatment of adult patients with metastatic SCLC with disease progression on or after platinum-based chemotherapy
- **How Supplied:** 4mg lyophilized powder in SDVs
- **Dose:** 3.2mg/m^2 via IV infusion every 21 days
- **Cost:** The WAC is $6,633.00 per SDV, resulting in a cost per dose of $9,402.28 every 21 days based on the recommended dosing for an adult patient 165cm tall and weighing 70kg.

Recommendations

The College of Pharmacy recommends the prior authorization of Cosela™ (trilaciclib), Gavreto™ (pralsetinib), Retevmo® (selpercatinib), Tabrecta™ (capmatinib), Tepmetko® (tepotinib), and Zepzelca™ (lurbinectedin) with the following criteria (shown in red):

Cosela™ (Trilaciclib) Approval Criteria:

1. Diagnosis of extensive-stage small cell lung cancer (ES-SCLC); and
2. Member is undergoing myelosuppressive chemotherapy with 1 of the following:
    a. Platinum (carboplatin or cisplatin) and etoposide-containing regimen; or
    b. Topotecan-containing regimen; and
3. Cosela™ will not be approved for concomitant use with colony-stimulating factors [e.g., granulocyte colony-stimulating factors (G-CSF), pegylated G-CSF (peg-G-CSF), granulocyte-macrophage colony-stimulating factors (GM-CSF)] for primary prophylaxis of febrile neutropenia prior to day 1 cycle 1 of chemotherapy.

Gavreto™ (Pralsetinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of NSCLC in adults; and
2. Recurrent, advanced, or metastatic disease; and
3. Rearranged during transfection (RET) fusion-positive tumor.

Gavreto™ (Pralsetinib) Approval Criteria [Thyroid Cancer Diagnosis]:

1. Adult and pediatric members 12 years of age and older; and
2. Diagnosis of advanced or metastatic disease with either:
    a. Rearranged during transfection (RET)-mutant medullary thyroid cancer (MTC) requiring systemic therapy; or
    b. RET fusion-positive thyroid cancer requiring systemic therapy and member is radioactive iodine-refractory (if radioactive iodine is appropriate).

Retevmo® (Selpercatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of recurrent, advanced, or metastatic NSCLC; and
2. Rearranged during transfection (RET) fusion-positive tumor; and
3. As a single agent.

Retevmo® (Selpercatinib) Approval Criteria [Thyroid Cancer Diagnosis]:

1. Adult and pediatric members 12 years of age and older; and
2. As a single agent; and
3. Diagnosis of advanced or metastatic disease with either:
    a. Rearranged during transfection (RET)-mutant medullary thyroid cancer (MTC) requiring systemic therapy; or
    b. RET fusion-positive thyroid cancer requiring systemic therapy and member is radioactive iodine-refractory (if radioactive iodine is appropriate).

Tabrecta™ (Capmatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of recurrent, advanced, or metastatic NSCLC; and
2. Mesenchymal-epithelial transition (MET) exon 14 skipping positive tumor; and
3. As a single-agent.

Tepmetko® (Tepotinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of advanced, metastatic, or unresectable NSCLC; and
2. Mesenchymal-epithelial transition (MET) exon 14 skipping positive tumor.

Zepzelca™ (Lurbinectedin) Approval Criteria [Small Cell Lung Cancer (SCLC) Diagnosis]:

1. Diagnosis of metastatic SCLC; and
2. Used following disease progression on or after platinum-based chemotherapy.

Additionally, the College of Pharmacy recommends updating the approval criteria for Alunbrig® (brigatinib), Cyramza® (ramucirumab), Imfinzi® (durvalumab), Keytruda® (pembrolizumab), Libtayo® (cemiplimab-rwlc), Lorbrena® (lorlatinib), Tagrisso® (osimertinib), and Tecentriq® (atezolizumab) based on recent FDA approvals (changes noted in red):

Alunbrig® (Brigatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Anaplastic lymphoma kinase (ALK) positivity.~~; and~~
3. ~~Progressed on or intolerant to crizotinib; and~~
4. ~~Brigatinib must be used as a single-agent only.~~

Cyramza® (Ramucirumab) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. First-line in combination with erlotinib; and
    a. Epidermal growth factor receptor (EGFR) exon 19 deletion or exon 21 L858R mutation; or
3. Subsequent therapy for metastatic disease; and
    a. In combination with docetaxel.

Imfinzi® (Durvalumab) Approval Criteria [Extensive-Stage Small Cell Lung Cancer (ES-SCLC) Diagnosis]:

1. Diagnosis of ES-SCLC; and
2. In combination with etoposide and either cisplatin or carboplatin followed by single-agent maintenance.

Libtayo® (Cemiplimab-rwlc) Approval Criteria [Basal Cell Carcinoma (BCC) Diagnosis]:

1. Diagnosis of locally advanced or metastatic BCC; and
2. Member has previously been treated with a hedgehog pathway inhibitor (HHI); or
3. Treatment with a HHI is not appropriate for the member.

Libtayo® (Cemiplimab-rwlc) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of advanced, unresectable, or metastatic NSCLC; and
2. High programmed death ligand 1 (PD-L1) expression [tumor proportion score (TPS) ≥50%]; and
3. No epidermal growth factor receptor (EGFR), anaplastic lymphoma kinase (ALK), or *ROS1* mutations.

Lorbrena® (Lorlatinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. Diagnosis of metastatic NSCLC; and
2. Tumor expresses anaplastic lymphoma kinase (ALK) translocation; and
3. As a single-agent as first-line therapy; or
4. As a single-agent as second-line therapy following disease progression on either alectinib or ceritinib; or
5. As a single-agent as third-line or greater therapy following disease progression on crizotinib and 1 other ALK inhibitor (i.e., ceritinib, alectinib).

Tagrisso® (Osimertinib) Approval Criteria [Non-Small Cell Lung Cancer (NSCLC) Diagnosis]:

1. As adjuvant therapy following tumor resection in members with epidermal growth factor receptor (EGFR) exon 19 deletions or exon 21 L858R mutations; or
2. Diagnosis of metastatic NSCLC; and
    a. EGFR T790M mutation-positive disease and following progression on erlotinib, afatinib, or gefitinib for asymptomatic disease, symptomatic brain lesions, or multiple symptomatic systemic lesions; or
    b. First-line treatment of members with EGFR exon 19 deletions or exon 21 L858R mutations.

Tecentriq® (Atezolizumab) Approval Criteria [Hepatocellular Carcinoma (HCC) Diagnosis]:

1. Diagnosis of advanced, unresectable, or metastatic HCC; and
2. Used in combination with bevacizumab; and
3. Member has not received prior systemic therapy.

The College of Pharmacy also recommends the removal of the Imfinzi® (durvalumab) criteria for the indication of locally advanced or metastatic bladder cancer based on FDA guided voluntary withdrawal of this indication by the manufacturer.

~~**Imfinzi® (Durvalumab) Approval Criteria [Urothelial Carcinoma Diagnosis]:**~~

1. ~~A diagnosis of locally advanced or metastatic urothelial carcinoma; and~~
2. ~~Progressed on or following platinum-containing chemotherapy.~~

Finally, the College of Pharmacy recommends updating the prior authorization criteria for Keytruda® (pembrolizumab) based on NCCN Compendium approval and the recent FDA approved indication (changes and new criteria noted in red; only criteria with updates are listed):

Keytruda® (Pembrolizumab) Approval Criteria [Esophageal, Gastric, or Gastroesophageal Junction (GEJ) Carcinoma Diagnosis]:

1. Diagnosis of locally advanced, recurrent, or metastatic esophageal, gastric, or GEJ carcinoma; and
2. Tumor must have positive programmed death ligand 1 (PD-L1) expression [combined positive score (CPS) ≥10]; and
3. For first-line therapy:
   a. Must be used in combination with either oxaliplatin or cisplatin plus a fluoropyrimidine; or
4. For second-line or greater therapy:
   a. Must be used following disease progression after 1 or more prior lines of systemic therapy; and
   b. Tumor must be squamous cell histology; and
   c. Must be used as monotherapy; and
   d. Member has not previously failed other programmed death 1 (PD-1) inhibitors [e.g., Opdivo (nivolumab)].

Utilization Details of Lung Cancer Medications: Calendar Year 2020

The following utilization data includes medications indicated for lung cancer; however, the data does not differentiate between lung cancer and other diagnoses, for which use may be appropriate.

Pharmacy Claims

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
DABRAFENIB PRODUCTS					
TAFINLAR CAP 75MG	12	3	$71,409.24	4	$5,950.77
TAFINLAR CAP 50MG	2	1	$8,558.88	2	$4,279.44
SUBTOTAL	**14**	**4**	**$79,968.12**	**3.5**	**$5,712.01**
TRAMETINIB PRODUCTS					
MEKINIST TAB 0.5MG	7	2	$36,652.88	3.5	$5,236.13

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
MEKINIST TAB 2MG	5	2	$59,776.45	2.5	$11,955.29
SUBTOTAL	**12**	**4**	**$96,429.33**	**3.0**	**$8,035.78**
LORLATINIB PRODUCTS					
LORBRENA TAB 100MG	12	1	$202,392.12	12	$16,866.01
SUBTOTAL	**12**	**1**	**$202,392.12**	**12**	**$16,866.01**
OSIMERTINIB PRODUCTS					
TAGRISSO TAB 80MG	7	4	$105,331.32	1.75	$15,047.33
SUBTOTAL	**7**	**4**	**$105,331.32**	**1.75**	**$15,047.33**
VEMURAFENIB PRODUCTS					
ZELBORAF TAB 240MG	6	2	$55,658.86	3	$9,276.48
SUBTOTAL	**6**	**2**	**$55,658.86**	**3**	**$9,276.48**
TOTAL	**51**	**12***	**$539,779.75**	**4.25**	**$10,583.92**

CAP = capsule; TAB = tablet
*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

Medical Claims

PRODUCT UTILIZED	TOTAL CLAIMS†	TOTAL MEMBERS*	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
BEVACIZUMAB J9035	953	321	$1,536,210.96	2.97	$1,611.97
PEMBROLIZUMAB J9271	482	103	$4,934,116.86	4.68	$10,236.76
NIVOLUMAB J9299	240	45	$2,271,364.44	5.33	$9,464.02
BEVACIZUMAB-AWWB Q5107	141	35	$556,383.00	4.03	$3,945.98
ATEZOLIZUMAB J9022	127	34	$1,214,944.40	3.74	$9,566.49
PEMETREXED J9305	111	28	$731,128.55	3.96	$6,586.74
DURVALUMAB J9173	95	18	$541,143.75	5.28	$5,696.25
IPILIMUMAB J9228	33	13	$693,837.14	2.54	$21,025.37
RAMUCIRUMAB J9308	14	12	$74,776.00	1.67	$5,341.14
TOTAL	**2,196**	**609**	**$12,553,905.10**	**3.61**	**$5,716.71**

†Total number of unduplicated claims.
*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

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Appendix L

Calendar Year 2020 Annual Review of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat)

Oklahoma Health Care Authority
April 2021

Current Prior Authorization Criteria

Ayvakit™ (Avapritinib) Approval Criteria [Gastrointestinal Stromal Tumor (GIST) Diagnosis]:

1. Diagnosis of unresectable or metastatic GIST in adult members; and
2. Member has a *PDGFRA* exon 18 mutation (including *PDGFRA* D842V mutations).

Bynfezia Pen™ (Octreotide) Approval Criteria [Acromegaly Diagnosis]:

1. Diagnosis of acromegaly; and
2. Documentation of inadequate response to or cannot be treated with surgical resection, pituitary irradiation, and bromocriptine mesylate or cabergoline at maximally tolerated doses; and
3. A patient-specific, clinically significant reason why the member cannot use other available short-acting injectable formulations of octreotide must be provided.

Bynfezia Pen™ (Octreotide) Approval Criteria [Metastatic Carcinoid Tumor or Vasoactive Intestinal Peptide-Secreting Tumors (VIPoma) Diagnosis]:

1. Diagnosis of advanced metastatic carcinoid tumor or VIPoma; and
2. Presence of severe diarrhea or flushing; and
3. A patient-specific, clinically significant reason why the member cannot use other available short-acting injectable formulations of octreotide must be provided.

Tazverik® (Tazemetostat) Approval Criteria [Epithelioid Sarcoma Diagnosis]:

1. Diagnosis of metastatic or locally advanced epithelioid sarcoma; and
2. Member is not eligible for complete resection; and
3. Member must be 16 years of age or older.

Tazverik® (Tazemetostat) Approval Criteria [Follicular Lymphoma (FL) Diagnosis]:*

1. Adult members with relapsed/refractory FL; and
2. *EZH2* mutation detected; and
3. Member must have received 2 lines of therapy or as subsequent therapy with no satisfactory alternative treatment options.

*The review and approval criteria for Tazverik® (tazemetostat) for the indication of follicular lymphoma (FL) can be found in the March 2021 Drug Utilization Review (DUR) Board packet; however, Tazverik® is reviewed annually with Ayvakit™ (avapritinib) and Bynfezia Pen™ (octreotide).

Utilization of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat): Calendar Year 2020

There was no SoonerCare utilization of Ayvakit™ (avapritinib), Bynfezia Pen™ (octreotide), or Tazverik® (tazemetostat) during calendar year 2020.

Prior Authorization of Ayvakit™ (Avapritinib), Bynfezia Pen™ (Octreotide), and Tazverik® (Tazemetostat)

There were 2 prior authorization requests submitted for 1 unique member for Bynfezia Pen™ (octreotide) during calendar year 2020; 1 request was incomplete and the subsequent request was approved. There were no prior authorization requests submitted for Ayvakit™ (avapritinib) or Tazverik® (tazemetostat) during calendar year 2020.

Market News and Updates[1,2]

Anticipated Patent Expiration(s):

- Ayvakit™ (avapritinib): October 2034
- Tazverik® (tazemetostat): December 2035
- Bynfezia Pen™ (octreotide): May 2038

New U.S. Food and Drug Administration (FDA) Approval(s):

- **June 2020:** The FDA granted accelerated approval to Tazverik® (tazemetostat), an enhancer of zeste homolog 2 (EZH2) inhibitor, for adult patients with relapsed or refractory FL whose tumors are positive for an *EZH2* mutation and who have received at least 2 prior systemic therapies, and for adult patients with relapsed or refractory FL who have no satisfactory alternative treatment options.

Recommendations

The College of Pharmacy does not recommend any changes to the current Ayvakit™ (avapritinib), Bynfezia Pen™ (octreotide), and Tazverik® (tazemetostat) prior authorization criteria at this time.

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[1] U.S. Food and Drug Administration (FDA). Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations. Available online at: https://www.accessdata.fda.gov/scripts/cder/ob/. Last revised 03/2021. Last accessed 03/17/2021.
[2] U.S. FDA. Hematology/Oncology (Cancer) Approvals & Safety Notifications. Available online at: https://www.fda.gov/drugs/resources-information-approved-drugs/hematologyoncology-cancer-approvals-safety-notifications. Last revised 03/10/2021. Last accessed 03/17/2021.

Appendix M

Calendar Year 2020 Annual Review of Anti-Diabetic Medications and 30-Day Notice to Prior Authorize Lyumjev™ (Insulin Lispro-aabc)

Oklahoma Health Care Authority
April 2021

Current Prior Authorization Criteria

Anti-Diabetic Medications Tier-2 Approval Criteria:

1. A trial of 1 Tier-1 medication (must include a trial of metformin titrated up to maximum dose), or a patient-specific, clinically significant reason why a Tier-1 medication is not appropriate must be provided.
2. For initiation with dual or triple therapy, additional Tier-2 medications may be approved based on current American Association of Clinical Endocrinologists (AACE) or American Diabetes Association (ADA) guidelines.
3. A clinical exception will apply for medications with a U.S. Food and Drug Administration (FDA) approved indication to reduce the risk of cardiovascular (CV) death in adult members with type 2 diabetes mellitus (T2DM) and CV disease for members with the diagnosis of T2DM at high risk for CV events. Tier structure rules for this indication will apply.
4. A clinical exception will apply for medications with an FDA approved indication to reduce the risk of end-stage kidney disease, worsening of kidney function, CV death, and heart failure (HF) hospitalization in adult members with T2DM and diabetic kidney disease. Tier structure rules for this indication will apply.
5. A clinical exception will apply for medications with an FDA approved indication to reduce the risk of hospitalization for HF in adult members with T2DM and other CV risk factors. Tier structure rules for this indication will apply.

Anti-Diabetic Medications Tier-3 Approval Criteria:

1. Member must have tried 1 Tier-2 medication in the same category and have a documented clinical reason why the Tier-2 medication is not appropriate (for Tier-3 medications that do not have a similar category in Tier-2, a medication from any category in Tier-2 may be used).
2. A clinical exception will apply for medications with an FDA approved indication to reduce the risk of cardiovascular (CV) death in adult members with type 2 diabetes mellitus (T2DM) and CV disease for members with the diagnosis of T2DM at high risk for CV events. Tier structure rules for this indication will apply.

3. A clinical exception will apply for medications with an FDA approved indication to reduce the risk of end-stage kidney disease, worsening of kidney function, CV death, and heart failure (HF) hospitalization in adult members with T2DM and diabetic kidney disease. Tier structure rules for this indication will apply.
4. A clinical exception will apply for medications with an FDA approved indication to reduce the risk of hospitalization for HF in adult members with T2DM and other CV risk factors. Tier structure rules for this indication will apply.

Anti-Diabetic Medications Special Prior Authorization (PA) Approval Criteria:

1. Member must be currently stabilized on the requested product or have attempted at least 3 other categories of Tier-2 or Tier-3 medications, or have a documented clinical reason why the requested product is necessary for the member; and
2. Use of Invokamet® XR [canagliflozin/metformin extended-release (ER)] or Jentadueto® XR (linagliptin/metformin ER) will require a patient-specific, clinically significant reason why the member cannot take the immediate-release formulation(s); and
3. Use of Bydureon® BCise™ (exenatide ER autoinjector pen) will require a patient-specific, clinically significant reason why the member cannot use the vial or pen formulation.

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
Alpha-Glucosidase Inhibitors			
acarbose (Precose®)		miglitol (Glyset®)	
Amylinomimetics			
			pramlintide (Symlin®)
Biguanides			
metformin (Glucophage®)			metformin ER (Fortamet®, Glumetza®)
metformin SR (Glucophage XR®)			metformin soln (Riomet®)
metformin/glipizide (Metaglip®)			metformin ER susp (Riomet ER™)
metformin/ glyburide (Glucovance®)			
DPP-4 Inhibitors			
	linagliptin (Tradjenta®)	alogliptin (Nesina®)	linagliptin/metformin ER (Jentadueto® XR)
	linagliptin/metformin (Jentadueto®)	alogliptin/metformin (Kazano®)	

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
	sitagliptin (Januvia®)	alogliptin/ pioglitazone (Oseni®)	
	sitagliptin/metformin (Janumet®)	saxagliptin (Onglyza®)	
	sitagliptin/ metformin ER (Janumet XR®)	saxagliptin/ metformin (Kombiglyze®, Kombiglyze XR®)	
DPP-4 Inhibitors/SGLT-2 Inhibitors			
	empagliflozin/ linagliptin (Glyxambi®)	dapagliflozin/ saxagliptin (Qtern®)	
		ertugliflozin/ sitagliptin (Steglujan™)	
Dopamine Agonists			
		bromocriptine (Cycloset®)	
Glinides			
repaglinide (Prandin®)	nateglinide (Starlix®)		
	repaglinide/ metformin (Prandimet®)		
GLP-1 Agonists			
	dulaglutide (Trulicity®)	lixisenatide (Adlyxin®)	exenatide ER autoinjector (Bydureon® BCise™)
	exenatide (Byetta®)	semaglutide (Ozempic®)	
	exenatide ER (Bydureon®)	semaglutide (Rybelsus®)	
	liraglutide (Victoza®)		
GLP-1 Agonists/Insulin			
		insulin degludec/ liraglutide (Xultophy® 100/3.6)+	
		insulin glargine/ lixisenatide (Soliqua® 100/33)+	
SGLT-2 Inhibitors			
	dapagliflozin (Farxiga®)	canagliflozin (Invokana®)	canagliflozin/metformin ER (Invokamet® XR)
	dapagliflozin/ metformin ER (Xigduo® XR)	canagliflozin/ metformin (Invokamet®)	

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
	empagliflozin (Jardiance®)	ertugliflozin (Steglatro™)	
	empagliflozin/ metformin (Synjardy®)	ertugliflozin/ metformin (Segluromet™)	
	empagliflozin/ metformin ER (Synjardy® XR)		
SGLT-2 Inhibitors/DPP-4 Inhibitors/Biguanides			
			dapagliflozin/ saxagliptin/metformin ER (Qternmet® XR)
			empagliflozin/ linagliptin/metformin ER (Trijardy® XR)
Sulfonylureas			
chlorpropamide (Diabinese®)			
glimepiride (Amaryl®)			
glipizide (Glucotrol®)			
glipizide SR (Glucotrol XL®)			
glyburide (Diabeta®)			
glyburide micronized (Micronase®)			
tolbutamide (Orinase®)			
Thiazolidinediones			
pioglitazone (Actos®)		pioglitazone/ glimepiride (Duetact®)	
		pioglitazone/ metformin (Actoplus Met®, Actoplus Met XR®)	
		rosiglitazone (Avandia®)	
		rosiglitazone/ glimepiride (Avandaryl®)	
		rosiglitazone/ metformin (Avandamet®)	

*Tier structure based on supplemental rebate participation and/or National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
+Unique criteria applies.
DPP-4 = dipeptidyl peptidase-4; ER = extended-release; GLP-1 = glucagon-like peptide-1; PA = prior authorization; SGLT-2 = sodium-glucose cotransporter-2; soln = solution; SR = sustained-release; susp = suspension

Admelog® (Insulin Lispro) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Humalog® (insulin lispro) must be provided.

Afrezza® (Insulin Human Inhalation Powder) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus (DM); and
2. Member must be 18 years of age or older; and
3. A patient-specific, clinically significant reason why other rapid-acting injectable insulins are not appropriate must be provided; and
4. For the diagnosis of type 1 DM, the member must use Afrezza® with a long-acting insulin; and
5. The member must not smoke or have chronic lung disease such as asthma or chronic obstructive pulmonary disease (COPD).

Basaglar® (Insulin Glargine) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Lantus® (insulin glargine) or Levemir® (insulin detemir) must be provided.

Fiasp® (Insulin Aspart) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use NovoLog® (insulin aspart) must be provided.

Humalog® KwikPen® U-200 (Insulin Lispro 200 Units/mL) Approval Criteria:

1. Authorization of the 200 units/mL strength requires a patient-specific, clinically significant reason why the member cannot use the 100 units/mL strength.

Humulin® R U-500 Vials (Insulin Human 500 Units/mL) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use the Humulin® R U-500 KwikPen® (insulin human 500 units/mL), which is available without prior authorization, must be provided.

Insulin Lispro (Generic Humalog® U-100) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use the brand formulation (Humalog®) must be provided.

Ryzodeg® (Insulin Degludec/Insulin Aspart) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Lantus® (insulin glargine) or Levemir® (insulin detemir) with NovoLog® (insulin aspart) must be provided.

Soliqua® 100/33 (Insulin Glargine/Lixisenatide) Approval Criteria:

1. An FDA approved diagnosis of type 2 diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Lantus® (insulin glargine) with an alternative glucagon-like peptide 1 (GLP-1) receptor agonist must be provided; and
3. Current Tier-3 criteria will apply.

Toujeo® (Insulin Glargine) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Lantus® (insulin glargine) must be provided, and the member must be using a minimum of 100 units of Lantus® (insulin glargine) per day.

Tresiba® (Insulin Degludec) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Lantus® (insulin glargine) or Levemir® (insulin detemir) must be provided.

Xultophy® 100/3.6 (Insulin Degludec/Liraglutide) Approval Criteria:

1. An FDA approved diagnosis of type 2 diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use Lantus® (insulin glargine) with Victoza® (liraglutide) must be provided; and
3. Current Tier-3 criteria will apply.

Utilization of Anti-Diabetic Medications: Calendar Year 2020

Comparison of Calendar Years

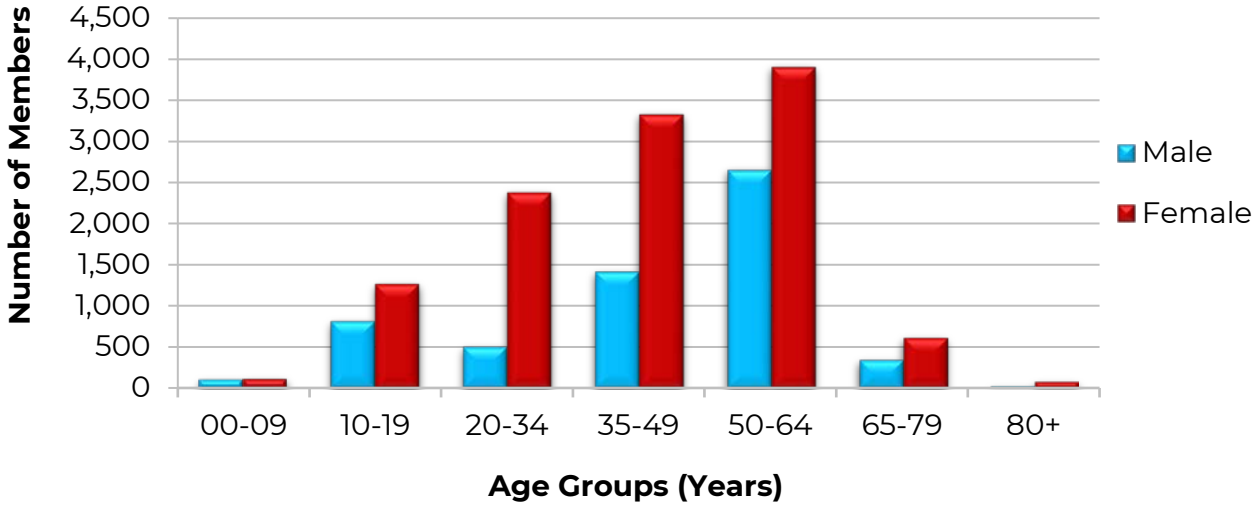
Calendar Year	*Total Members	Total Claims	Total Cost	Cost/ Claim	Cost/ Day	Total Units	Total Days
2019	17,268	125,023	$43,347,920.50	$346.72	$8.67	6,015,611	5,001,983
2020	17,567	127,151	$49,905,210.37	$392.49	$8.91	6,685,889	5,598,743
% Change	**1.70%**	**1.70%**	**15.10%**	**13.20%**	**2.80%**	**11.10%**	**11.90%**
Change	**299**	**2,128**	**$6,557,289.87**	**$45.77**	**$0.24**	**670,278**	**596,760**

*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

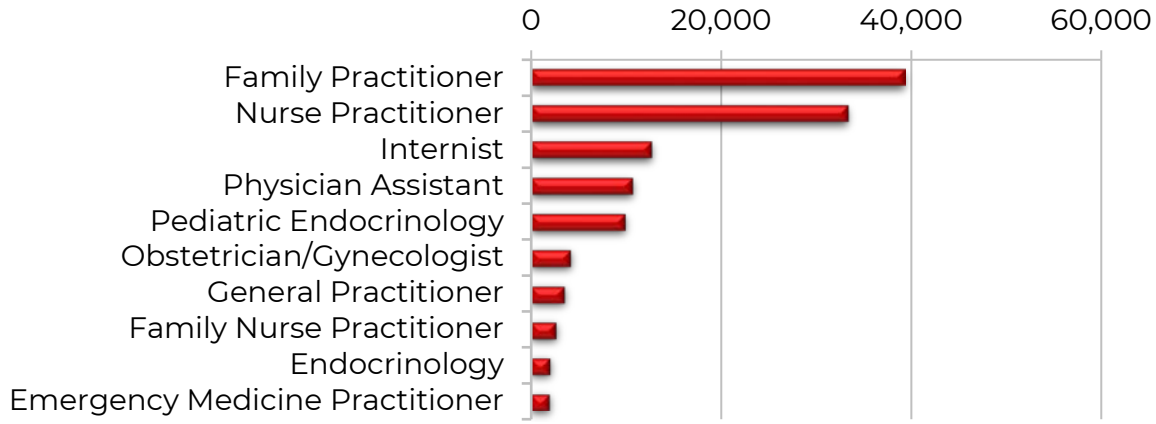
- Please note: The anti-diabetic medications are a supplementally rebated class of medications. Supplemental rebates are not reflected in

the data in this report; therefore, costs included in this report do not reflect net costs.

Demographics of Members Utilizing Anti-Diabetic Medications



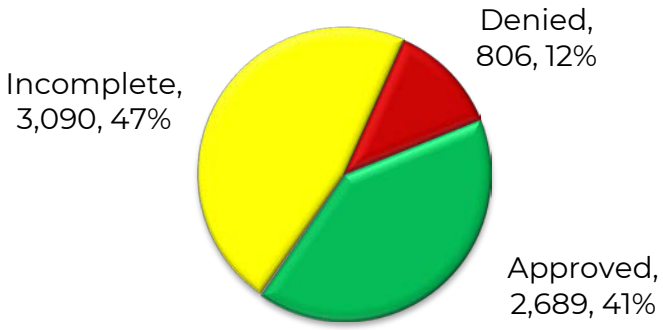
Top Prescriber Specialties of Anti-Diabetic Medications by Number of Claims



Prior Authorization of Anti-Diabetic Medications

There were 6,585 prior authorization requests submitted for anti-diabetic medications during calendar year 2020. Of the 6,585 total prior authorization requests submitted, 3,766 were for non-insulin anti-diabetic medications and 2,819 were for insulin products. Computer edits are in place to detect lower tiered non-insulin medications in a member's recent claims history and generate automated prior authorizations where possible. The following chart shows the status of the submitted petitions for calendar year 2020.

Status of Petitions



Market News and Updates[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16]

Anticipated Patent Expiration(s):

- Riomet® (metformin oral solution): August 2021
- Kombiglyze® XR [saxagliptin/metformin extended-release (ER) tablet]: July 2025
- Januvia® (sitagliptin tablet): May 2027
- Janumet® XR (sitagliptin/metformin ER tablet): May 2027
- Onglyza® (saxagliptin tablet): November 2028
- Janumet® (sitagliptin/metformin tablet): January 2029
- Actoplus Met® (pioglitazone/metformin ER tablet): February 2029
- Invokamet® (canagliflozin/metformin tablet): February 2029
- Invokamet® XR (canagliflozin/metformin ER tablet): February 2029
- Qtern® (dapagliflozin/saxagliptin tablet): December 2029
- Farxiga® (dapagliflozin tablet): May 2030
- Jentadueto® (linagliptin/metformin tablet): June 2030
- Steglatro™ (ertugliflozin tablet): July 2030
- Bydureon® BCise™ (exenatide ER auto-injector): October 2030
- Steglujan™ (ertugliflozin/sitagliptin tablet): October 2030
- Segluromet™ (ertugliflozin/metformin tablet): October 2030
- Xigduo® XR (dapagliflozin/metformin ER tablet): November 2030
- Qternmet® XR (dapagliflozin/saxagliptin/metformin ER tablet): November 2030
- Tradjenta® (linagliptin tablet): March 2031
- Invokana® (canagliflozin tablet): May 2031
- Cycloset® (bromocriptine tablet): April 2032
- Jentadueto XR® (linagliptin/metformin ER tablet): March 2033
- Ozempic® (semaglutide injection): June 2033
- Adlyxin® (lixisenatide injection): March 2034
- Synjardy® (empagliflozin/metformin tablet): April 2034
- Rybelsus® (semaglutide tablet): May 2034
- Glyxambi® (empagliflozin/linagliptin tablet): June 2034
- Synjardy® XR (empagliflozin/metformin ER tablet): June 2034

- Trijardy™ XR (empagliflozin/linagliptin/metformin ER tablet): June 2034
- Jardiance® (empagliflozin tablet): June 2034
- Riomet ER™ (metformin ER oral suspension): May 2035
- Victoza® (liraglutide injection): July 2037
- Actoplus Met XR® (pioglitazone/metformin ER tablet): The manufacturer has discontinued marketing the brand formulation. No generic formulations are available.
- Bydureon® (exenatide ER injection) pen/vial: The manufacturer has discontinued marketing the pen and vial formulation.

U.S. Food and Drug Administration (FDA) Approval(s) and Expanded Indication(s):

- **May 2020:** The FDA approved Farxiga® (dapagliflozin) to reduce the risk of cardiovascular (CV) death and hospitalization for heart failure (HF) in adults with HF [New York Heart Association (NYHA) class II-IV] with reduced ejection fraction (HFrEF) with and without type 2 diabetes mellitus (T2DM). Farxiga® is the first sodium-glucose co-transporter-2 (SGLT-2) inhibitor approved by the FDA to treat patients with HFrEF [left ventricular ejection fraction (LVEF) ≤40%]. The FDA approval was based on positive results from the landmark Phase 3 DAPA-HF trial, which showed Farxiga® achieving a statistically significant and clinically meaningful reduction of CV death or hospitalization for HF, compared to placebo. The decision follows the Priority Review designation granted by the FDA earlier in 2020 and the Fast Track designation granted in September 2019. The DAPA-HF trial showed that Farxiga®, in addition to standard of care, reduced the risk of the composite outcome of CV death or the worsening of HF versus placebo by 26% [absolute risk reduction (ARR) = 5% (event rate/100 patient years: 11.6 vs 15.6, respectively); P<0.0001] in patients with HFrEF. During the trial duration, 1 CV death, hospitalization, or urgent visit associated with HF could be avoided for every 21 patients treated with Farxiga®. The safety profile of Farxiga® in the DAPA-HF trial was consistent with the well-established safety profile of the medication. The data from the DAPA-HF trial was published in *The New England Journal of Medicine*. In October 2019, the FDA approved Farxiga® to reduce the risk of hospitalization for HF in adult patients with T2DM and established CV disease or multiple CV risk factors. The approval was based on the DECLARE-TIMI 58 trial. Farxiga® is also indicated as an adjunct to diet and exercise to improve glycemic control in adults with T2DM.
- **June 2020:** The FDA approved Lyumjev™ (insulin lispro-aabc) injection 100 units/mL, a new rapid-acting insulin indicated to improve glycemic control in adults with type 1 diabetes mellitus (T1DM) or T2DM. The approval of Lyumjev™ was based on data from the Phase 3 trials, PRONTO-T1D and PRONTO-T2D, which were randomized, active

controlled, treat-to-target comparisons of Lyumjev™ and Humalog® (insulin lispro injection, 100 units/mL) in adults with T1DM or T2DM, respectively. Both studies met the primary endpoint of non-inferior hemoglobin HbA1c (A1c) reduction from baseline compared to Humalog® at 26 weeks, when Lyumjev™ and Humalog® were dosed at mealtime. In both studies, Lyumjev™ demonstrated superior reduction in blood glucose spikes at both 1 hour and 2 hours after a test meal compared to Humalog®. Lyumjev™ will be included in the Lilly Insulin Value Program, allowing anyone with commercial insurance and those without insurance to fill their monthly prescription of Lyumjev™ for $35.

- **September 2020:** The FDA approved 2 additional doses of Trulicity® (dulaglutide), expanding the label of once-weekly Trulicity® to include 3mg and 4.5mg doses. The expanded approval is based on data from the Phase 3 trial, AWARD-11, which showed the additional doses led to further benefits in HbA1c and body weight reduction when compared to Trulicity® 1.5mg in people with T2DM. The efficacy estimand, which analyzes participants who remained on treatment throughout the trial, showed both doses led to significant reductions in HbA1c and weight: 4.5mg (HbA1c: -1.9%; weight: -10.4 pounds), 3mg (HbA1c: -1.7%; weight: -8.8 pounds), and 1.5mg (HbA1c: -1.5%; weight: -6.8 pounds).

Guideline Update(s):

- **The American College of Cardiology (ACC)** published the *2020 Expert Consensus Decision Pathway on Novel Therapies for Cardiovascular Risk Reduction in Patients with Type 2 Diabetes*. This document provides guidance on clinical and nonclinical topics in the form of solution sets relevant to CV care. SGLT-2 inhibitors and glucagon-like peptide 1 receptor agonists (GLP-1 agonists) have been associated with a reduction in major CV events, and SGLT-2 inhibitors also diminish the risk of HF and diabetic kidney disease. This document provides information from recent studies and practical guidance for the management of CV outcomes in T2DM patients, providing information on the use of SGLT-2 inhibitors and GLP-1 agonists, considerations for optimal therapy, and guidance for monitoring patients.
- **American Diabetes Association (ADA)** released updated guidelines, *Standards of Medical Care in Diabetes 2021*, which provides the latest in comprehensive, evidence-based recommendations for the diagnosis and treatment of children and adults with T1DM, T2DM, or gestational diabetes; strategies for the prevention or delay of T2DM; and therapeutic approaches that can reduce complications, mitigate CV and renal risk, and improve health outcomes. This update presents evolving evidence for diabetes treatment of patients also managing chronic kidney disease (CKD) and HF, the use of technology for diabetes management and individualized care, as well as

recommendations for continuous glucose monitoring (CGM) for patients with diabetes based on therapy, important information on addressing social determinants of health in diabetes, barriers to and critical times for diabetes self-management education and support, and vaccine-specific updates, including those related to COVID-19.

News:

- **June 2020:** The CV Outcome Trial (CVOT) results for a fourth SGLT-2 inhibitor, ertugliflozin, were most notable for their consistency with the 4 prior, similar studies conducted on the 3 other drugs from this class in the United States market, canagliflozin, dapagliflozin, and empagliflozin. These tests further solidified the important role this drug class has recently taken on for patients with T2DM. The CVOTs, mandated in 2008 by FDA guidance for T2DM drugs that is now in the process of undergoing an update, have had the main goal of proving safety of these drugs. The primary endpoint of the new ertugliflozin trial, VERTIS-CV (CV Outcomes Following Ertugliflozin Treatment in Type 2 Diabetes Mellitus Participants With Vascular Disease), was non-inferior to placebo when used on top of standard T2DM medications for the combined endpoint of CV death, nonfatal myocardial infarction (MI), or nonfatal stroke. But the ertugliflozin results, which showed statistically significant superiority to placebo for just 1 endpoint, hospitalization for HF, made it unclear whether clinicians will regard ertugliflozin as the top agent from this class to prescribe. VERTIS-CV enrolled and followed patients with T2DM and established atherosclerotic CV disease at 531 centers in 34 countries from December 2013 to December 2019. Other effects from ertugliflozin recorded during the trial were consistent with prior studies of the drug, which is currently FDA approved for glycemic control. Compared with placebo, ertugliflozin treatment reduced HbA1c by an average of 0.5% after 1 year, reduced average body weight by about 2.5kg after 1 year with additional modest weight loss during subsequent years on the drug, and reduced systolic blood pressure by about 3mmHg after 1 year. The study's findings are consistent with what's been seen in the other studies of CV and renal outcomes in the EMPA-REG OUTCOME study of empagliflozin, CANVAS and CREDENCE studies of canagliflozin, and the DECLARE-TIMI 58 trial with dapagliflozin. Ertugliflozin's safety profile was generally consistent with prior studies of the drug and others in the class, with overall no increase in total adverse events or serious adverse events, compared with placebo, and modestly increased rates of urinary tract and mycotic genital infections. The results of the new SGLT-2 inhibitor meta-analysis aid to support contemporary society recommendations to prioritize the use of SGLT-2 inhibitors

independent of glucose-control considerations in patients with T2DM with or at high risk for renal and CV complications.

- **August 2020:** Detailed results from the groundbreaking Phase 3 DAPA-CKD trial showed that Farxiga® (dapagliflozin) in addition to standard of care reduced the composite measure of worsening of renal function or risk of CV or renal death by 39% compared to placebo (P<0.0001) in patients with CKD Stages 2-4 and elevated urinary albumin excretion. The results were consistent in patients both with and without T2DM. CKD affects nearly 700 million people worldwide, many of them still undiagnosed, and the most common causes are diabetes, hypertension, and glomerulonephritis. The primary composite endpoint was ≥50% sustained decline in estimated glomerular filtration rate (eGFR), onset of end-stage kidney disease (ESKD), and CV or renal death. The ARR was 5.3% over the median time in study of 2.4 years. The trial also met all secondary endpoints, including significantly reducing death from any cause by 31% (ARR=2.1%; P=0.0035) compared to placebo. The safety and tolerability of Farxiga® were consistent with the well-established safety profile of the medication. In the trial, patients treated with Farxiga® experienced fewer serious adverse events compared to placebo (29.5% versus 33.9%, respectively). Diabetic ketoacidosis was not reported in the Farxiga® group versus 2 patients in the placebo group.
- **August 2020:** Eli Lilly and Company introduced the Lilly Insulin Value Program, which reduces the monthly out-of-pocket prescription cost for most Lilly insulins to $35 for patients with commercial insurance and those with no insurance. For patients with government insurance who can't use the savings programs, Lilly has introduced 2 additional non-branded options to help patients living with diabetes afford their insulin. Non-branded versions of Humalog® Mix 75/25™ KwikPen® (insulin lispro protamine and insulin lispro injectable suspension 100 units/mL) and Humalog® Junior KwikPen® (insulin lispro injection 100 units/mL) are available for order in pharmacies. They are the same as the branded versions, with different packaging and a 50% lower list price of $265.20 for a package of 5 KwikPens®. Lilly also continues to offer insulin lispro injection 100 units/mL (U-100) launched in May 2019, at a 50% lower list price. Because these non-branded options are the same insulin as the branded versions, pharmacists can substitute with the non-branded options for a potential reduction in out-of-pocket expenses. Depending on insurance coverage, the non-branded insulins may not be the lowest-cost option for everyone. Any pharmacy that does not stock the non-branded options can place an order for them and expect delivery in 1-2 days. These non-branded insulins are distributed by major United States wholesalers and are included in the Lilly Insulin Value Program.

- **September 2020:** AstraZeneca announced that Bydureon® (exenatide) pen will be discontinued as of March 2021 due to business reasons. Bydureon BCise® (exenatide) autoinjector pen will continue to be available. Bydureon® and Bydureon BCise® pens are both indicated as an adjunct to diet and exercise to improve glycemic control in adults with T2DM. Bydureon BCise® pen is an autoinjector that does not need to be titrated or reconstituted. Bydureon® 2mg single-dose vial was previously discontinued from the market in September 2018.
- **October 2020:** A pre-specified analysis of DAPA-HF data showed the addition of dapagliflozin (Farxiga®) to a mineralocorticoid receptor antagonist (MRA) halved the incidence of moderate to severe hyperkalemia in patients with HFrEF. Data showing a link between dapagliflozin and a decrease in MRA-induced hyperkalemia, believed to be first evidence of such an association, were presented at Kidney Week 2020. The 4,744 DAPA-HF participants were randomly assigned to guideline-directed therapy with dapagliflozin or placebo. During a median follow-up of 18.2 months, there was a significant 26% reduction in the primary end point, worsening HF or CV death in patients with chronic HFrEF, as reported last year in the *New England Journal of Medicine*. At baseline, roughly 70% of the study participants were receiving treatment with an MRA, either spironolactone or eplerenone. This class of agents is known to potentially cause an elevation in serum potassium levels. In that subgroup, the cumulative incidence of moderate-to-severe hyperkalemia, defined as a potassium level >6.0mmol/L, was lower in the dapagliflozin group than in the placebo group (1.0 vs 1.7 episodes per 100 patient-years). The reduction in hyperkalemia was significant in the dapagliflozin group [hazard ratio (HR): 0.50; P=0.01]. For mild hyperkalemia, defined as a potassium level >5.5mmol/L, the incidence was not significantly different between the dapagliflozin and placebo groups (HR: 0.86; P=0.14). For DAPA-HF participants who were not receiving an MRA at baseline, there was no significant association between dapagliflozin and hyperkalemia.
- **January 2021:** The FDA has accepted a supplemental New Drug Application (sNDA) for Jardiance® (empagliflozin) which is being investigated as a potential new treatment to reduce the risk of CV death and hospitalization for HF and to slow kidney function decline in adults with chronic HFrEF, including those with and without T2DM. The sNDA is based on results from the EMPEROR-Reduced Phase 3 trial, in which Jardiance® was associated with a significant 25% relative risk reduction (RR) in the primary composite endpoint of time to CV death or hospitalization due to HF. Additionally, the rate of decline in eGFR was slower with Jardiance® than with placebo, when both were given in addition to standard of care treatment. Results were published in *The New England Journal of Medicine* in August 2020.

Pipeline:

- **Insulin Analog Icodec:** New data shows the investigational once-weekly basal insulin analog icodec by Novo Nordisk was comparable in efficacy and safety to once-daily insulin glargine U-100. Insulin icodec binds to albumin to create a circulating depot with a 196-hour half-life. A once-weekly injection is designed to cover an individual's basal insulin requirements for a full week with steady insulin release. Because of its concentrated formulation, its injection volume is equivalent to that of daily glargine U-100. A Phase 2, randomized, double-blind, double-dummy, parallel-group treat-to-target trial included 247 insulin-naive patients with T2DM with A1c levels of 7.0% to 9.5% despite taking metformin, with about half also taking a dipeptidyl peptidase 4 (DPP-4) inhibitor. Patients were randomized to weekly insulin icodec plus daily placebo (N=125) or daily insulin glargine U-100 plus weekly placebo (N=122). All participants took 7 injections per week with a vial and syringe plus 1 injection per week with a pen injector. Doses were titrated up or down to achieve blood glucose levels 70-108mg/dL, with glargine dose adjustments of 2 or 4 units and icodec units of 14 or 28 units. Participants were a mean age of 59.6 years, had a diabetes duration of 9.7 years, and 56.3% were men. Baseline HbA1c was 8.0% overall and fasting blood glucose was 181mg/dL, and both were similar between the 2 groups. The primary endpoint, change in A1c from baseline to week 26, dropped 1.33% points with icodec and 1.15% points with glargine, which was not significantly different (P=0.08). Estimated mean HbA1c levels were 6.7% for icodec and 6.9% for glargine. Fasting plasma glucose levels were nearly identical at 26 weeks, with reductions of 58mg/dL with icodec and 54mg/dL with glargine (P=0.34). However, there was a significant difference in favor of icodec in the 9-point self-monitoring of blood glucose profile, with a difference in mean change from baseline to week 26 of –7.9mg/dL (P=0.01). Total insulin doses during the last 2 weeks of treatment with icodec vs glargine were 229 vs 284 units/week (P=0.01); those translate to approximate daily doses of 33 vs 41 units/day, respectively. Both groups gained a small amount of weight, 1.5kg with icodec and 1.6kg with glargine by week 26 (P=0.88). Hypoglycemia was more common with icodec than glargine, including mild (53.6% vs 37.7%), moderate or clinically significant (16.0% vs 9.8%), and severe [1 (0.8%) vs 0 participants]. Corresponding event rates were 508.9 vs 210.8 per 100 patient-years (mild hypoglycemia), 52.5 vs 45.6 per 100 patient-years (moderate or clinically significant), and 1.4 vs 0 per 100 patient-years (severe) for icodec vs glargine. Insulin analog icodec Phase 3 studies are currently recruiting.

Lyumjev™ (Insulin Lispro-aabc) Product Summary[17,18]

Indication(s): Lyumjev™ (insulin lispro-aabc) is a rapid-acting human insulin analog indicated to improve glycemic control in adults with diabetes mellitus (DM).

Dosing:

- Lyumjev™ (insulin lispro-aabc) is supplied in 2 strengths of 100 units/mL (U-100) and 200 units/mL (U-200). The U-200 strength is available as a 3mL single-patient-use KwikPen®. The U-100 strength is available as a 10mL multiple-dose vial, 3mL single-patient-use KwikPen®, 3mL single-patient-use Junior KwikPen®, 3mL single-patient-use Tempo Pen™, and 3mL single-patient-use cartridges.
- Subcutaneous (Sub-Q) Injection:
  - Lyumjev™ should be administered as a sub-Q injection into the abdomen, upper arm, thigh, or buttocks at the start of a meal or within 20 minutes after starting a meal.
  - The injection site should be rotated within the same region to reduce risk of lipodystrophy and localized cutaneous amyloidosis.
  - Lyumjev™ should generally be used in regimens with an intermediate or long-acting insulin.
- Intravenous (IV) Infusion:
  - Lyumjev™ U-100 should be administered IV only under medical supervision.
  - Lyumjev™ U-100 should be diluted to a concentration of 1 unit/mL when administered intravenously.
- Lyumjev™ dosage should be individualized and adjusted based on the patient's metabolic needs, glucose monitoring results, and glycemic control goal.
- Lyumjev™ dose adjustments may be needed when switching from another insulin, with changes in physical activity, changes in concomitant medications, changes in meal patterns (i.e. amount and type of food, timing of food intake), changes in renal or hepatic function, or during acute illness.

Mechanism of Action: The primary activity of Lyumjev™ is the regulation of glucose metabolism. Insulins, including insulin lispro-aabc, exert their specific action through binding to insulin receptors. Receptor-bound insulin lowers glucose by stimulating peripheral glucose uptake by skeletal muscle and fat, and by inhibiting hepatic glucose production. Insulins inhibit lipolysis and proteolysis, and enhance protein synthesis.

Contraindication(s):

- During episodes of hypoglycemia
- Hypersensitivity to insulin lispro-aabc or 1 of the excipients in Lyumjev™

Warnings and Precautions:

- Lyumjev™ prefilled pen or cartridge should never be shared between patients, even if the needle is changed.
- Hyperglycemia or hypoglycemia with changes in insulin regimen: Changes to a patient's insulin regimen (e.g., insulin strength, manufacturer, type, injection site or method of administration) should be made under close medical supervision with increased frequency of glucose monitoring.
- Hypoglycemia: Hypoglycemia may be life-threatening. Frequency of glucose monitoring should be increased with changes to: insulin dosage, co-administered glucose lowering medications, meal pattern, and physical activity; and in patients with renal impairment or hepatic impairment or hypoglycemia unawareness.
- Hypoglycemia due to medication errors: Accidental mix-ups between insulin products can occur. Patients should be instructed to check insulin labels before injection. Do not transfer Lyumjev™ U-200 from the Lyumjev™ KwikPen® to a syringe as overdosage and severe hypoglycemia can result.
- Hypokalemia: Hypokalemia may be life-threatening. Potassium levels should be monitored in patients at risk for hypokalemia and treated if indicated.
- Hypersensitivity reactions: Severe, life-threatening, generalized allergy, including anaphylaxis, can occur. Lyumjev™ should be discontinued, monitor, and treat if indicated.
- Fluid retention and HF with concomitant use of thiazolidinediones (TZDs): Patients should be observed for signs and symptoms of HF; dosage reduction or discontinuation of TZD should be considered if HF occurs.

Adverse Reactions: Adverse reactions observed with Lyumjev™ include hypoglycemia, injection site reactions, allergic reactions, rash, pruritus, lipodystrophy, and weight gain.

Efficacy: The efficacy of Lyumjev™ was established in (2) 26-week, randomized, active controlled, treat-to-target studies in adult patients.

- PRONTO-T1D was a study in 1,222 patients with T1D. Patients were randomized to either blinded mealtime Lyumjev™, blinded mealtime Humalog®, or open-label post-meal Lyumjev™, all in combination with a basal insulin.
    - At week 26, treatment with mealtime Lyumjev™ provided a mean reduction in HbA1c that met the pre-specified non-inferiority margin (0.4%) vs. mealtime Humalog® (treatment difference: -0.08; 95% CI: -0.16, 0.00).

- In addition, post-meal Lyumjev™ met the pre-specified non-inferiority margin (0.4%) vs. mealtime Humalog® (treatment difference: 0.14; 95% CI: 0.05, 0.22).
- Insulin doses were similar in all treatment groups at baseline and at 26 weeks.

- PRONTO-T2D was a study in 673 patients with T2DM who at study entry were on up to 3 oral antidiabetic medications, basal insulin, and at least 1 prandial insulin injection or premixed insulin with at least 2 injections daily. Patients were allowed to continue on metformin and/or a SGLT-2 inhibitor and were randomized to either mealtime Lyumjev™ or to mealtime Humalog®, both in combination with a basal insulin.
  - At week 26, treatment with mealtime Lyumjev™ provided a mean reduction of HbA1c from baseline that met the pre-specified non-inferiority margin (0.4%) vs. mealtime Humalog® (treatment difference; 0.03; 95% CI: -0.08, 0.13).
  - Insulin doses were similar in both treatment groups at baseline and at 26 weeks.

Cost Comparison:

Medication	Cost Per mL
Humalog® (insulin lispro) U-100 vial	$26.52
Lyumjev™ (insulin lispro-aabc) U-100 syringe	**$35.36**
Lyumjev™ (insulin lispro-aabc) U-200 syringe	**$70.72**

Costs do not reflect rebated prices or net costs. Costs based on National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).

Recommendations

The College of Pharmacy recommends the prior authorization of Lyumjev™ (insulin lispro-aabc) with the following criteria (changes shown in red):

Insulin Lispro (Generic Humalog® U-100) and Lyumjev™ (Insulin Lispro-aabc 100 Units/mL) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. A patient-specific, clinically significant reason why the member cannot use the brand formulation (Humalog®) must be provided (the brand formulation of Humalog® U-100 is preferred).

Humalog® KwikPen® U-200 (Insulin Lispro 200 Units/mL) and Lyumjev™ (Insulin Lispro-aabc 200 Units/mL) Approval Criteria:

1. An FDA approved diagnosis of diabetes mellitus; and
2. Authorization of the 200 units/mL strength requires a patient-specific, clinically significant reason why the member cannot use the 100 units/mL strength (the brand formulation of Humalog® U-100 is preferred).

Additionally, the College of Pharmacy recommends updating the anti-diabetic medications Tier-2 and Tier-3 approval criteria to provide a clinical exception for FDA approved indications for higher tiered medications not covered by lower tiered medications (changes shown in red):

Anti-Diabetic Medications Tier-2 Approval Criteria:

1. A trial of 1 Tier-1 medication (must include a trial of metformin titrated up to maximum dose), or a patient-specific, clinically significant reason why a Tier-1 medication is not appropriate must be provided.
2. For initiation with dual or triple therapy, additional Tier-2 medications may be approved based on current American Association of Clinical Endocrinologists (AACE) or American Diabetes Association (ADA) guidelines.
3. A clinical exception will apply for medications with a unique FDA approved indication not covered by all Tier-1 medications. Tier structure rules for unique FDA approved indications will apply.
4. ~~A clinical exception will apply for medications with an FDA approved indication to reduce the risk of cardiovascular (CV) death in adult patients with type 2 diabetes mellitus (T2DM) and CV disease for patients with the diagnosis of T2DM at high risk for CV events. Tier structure rules for this indication will apply.~~
5. ~~A clinical exception will apply for medications with an FDA approved indication to reduce the risk of end-stage kidney disease, worsening of kidney function, CV death, and heart failure (HF) hospitalization in adults with T2DM and diabetic kidney disease. Tier structure rules for this indication will apply.~~
6. ~~A clinical exception will apply for medications with an FDA approved indication to reduce the risk of hospitalization for HF in adults with T2DM and other CV risk factors. Tier structure rules for this indication will apply.~~

Anti-Diabetic Medications Tier-3 Approval Criteria:

1. Member must have tried 1 Tier-2 medication in the same category and have a documented clinical reason why the Tier-2 medication is not appropriate (for Tier-3 medications that do not have a similar category in Tier-2, a medication from any category in Tier-2 may be used).
2. A clinical exception will apply for medications with a unique FDA approved indication not covered by all Tier-1 and Tier-2 medications. Tier structure rules for unique FDA approved indications will apply.
3. ~~A clinical exception will apply for medications with an FDA approved indication to reduce the risk of cardiovascular (CV) death in adult patients with type 2 diabetes mellitus (T2DM) and CV disease for patients with the diagnosis of T2DM at high risk for CV events. Tier structure rules for this indication will apply.~~

4. ~~A clinical exception will apply for medications with an FDA approved indication to reduce the risk of end-stage kidney disease, worsening of kidney function, CV death, and heart failure (HF) hospitalization in adults with T2DM and diabetic kidney disease. Tier structure rules for this indication will apply.~~
5. ~~A clinical exception will apply for medications with an FDA approved indication to reduce the risk of hospitalization for HF in adults with T2DM and other CV risk factors. Tier structure rules for this indication will apply.~~

Finally, the College of Pharmacy recommends moving Adlyxin® (lixisenatide) and Rybelsus® (semaglutide) from Tier-3 to Special Prior Authorization (PA) Tier of the Anti-Diabetic Medications Tier Chart based on net cost, removing Bydureon® pen from the Tier Chart based on product discontinuation, and updating the Special PA criteria (changes shown in red):

Anti-Diabetic Medications Special PA Approval Criteria:

1. Member must be currently stabilized on the requested product or have attempted at least 3 other categories of Tier-2 or Tier-3 medications, or have a documented clinical reason why the requested product is necessary for the member; and
2. Use of Invokamet® XR [canagliflozin/metformin extended-release (ER)] or Jentadueto® XR (linagliptin/metformin ER) will require a patient-specific, clinically significant reason why the member cannot take the immediate-release formulation(s); and
3. Use of Adlyxin® (lixisenatide), Bydureon® BCise™ (exenatide ER autoinjector pen), or Rybelsus® (semaglutide) will require a patient-specific, clinically significant reason (other than convenience) why the member cannot use ~~the vial or pen formulation~~ all available lower-tiered glucagon-like peptide 1 receptor agonists (GLP-1 agonists).

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
Alpha-Glucosidase Inhibitors			
acarbose (Precose®)		miglitol (Glyset®)	
Amylinomimetics			
			pramlintide (Symlin®)
Biguanides			
metformin (Glucophage®)			metformin ER (Fortamet®, Glumetza®)
metformin SR (Glucophage XR®)			metformin soln (Riomet®)
metformin/glipizide (Metaglip®)			metformin ER susp (Riomet ER™)
metformin/			

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
glyburide (Glucovance®)			
DPP-4 Inhibitors			
	linagliptin (Tradjenta®)	alogliptin (Nesina®)	linagliptin/metformin ER (Jentadueto® XR)
	linagliptin/metformin (Jentadueto®)	alogliptin/metformin (Kazano®)	
	sitagliptin (Januvia®)	alogliptin/ pioglitazone (Oseni®)	
	sitagliptin/metformin (Janumet®)	saxagliptin (Onglyza®)	
	sitagliptin/ metformin ER (Janumet XR®)	saxagliptin/ metformin (Kombiglyze®, Kombiglyze XR®)	
DPP-4 Inhibitors/SGLT-2 Inhibitors			
	empagliflozin/ linagliptin (Glyxambi®)	dapagliflozin/ saxagliptin (Qtern®)	
		ertugliflozin/ sitagliptin (Steglujan™)	
Dopamine Agonists			
		bromocriptine (Cycloset®)	
Glinides			
repaglinide (Prandin®)	nateglinide (Starlix®)		
	repaglinide/ metformin (Prandimet®)		
GLP-1 Agonists			
	dulaglutide (Trulicity®)	~~**lixisenatide (Adlyxin®)**~~	exenatide ER autoinjector (Bydureon® BCise™)
	exenatide (Byetta®)	semaglutide (Ozempic®)	**lixisenatide (Adlyxin®)**
	~~**exenatide ER (Bydureon®)**~~	~~**semaglutide (Rybelsus®)**~~	**semaglutide (Rybelsus®)**
	liraglutide (Victoza®)		
GLP-1 Agonists/Insulin			
		insulin degludec/ liraglutide (Xultophy® 100/3.6)+	

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
		insulin glargine/ lixisenatide (Soliqua® 100/33)+	
SGLT-2 Inhibitors			
	dapagliflozin (Farxiga®)	canagliflozin (Invokana®)	canagliflozin/metformin ER (Invokamet® XR)
	dapagliflozin/ metformin ER (Xigduo® XR)	canagliflozin/ metformin (Invokamet®)	
	empagliflozin (Jardiance®)	ertugliflozin (Steglatro™)	
	empagliflozin/ metformin (Synjardy®)	ertugliflozin/ metformin (Segluromet™)	
	empagliflozin/ metformin ER (Synjardy® XR)		
SGLT-2 Inhibitors/DPP-4 Inhibitors/Biguanides			
			dapagliflozin/ saxagliptin/metformin ER (Qternmet® XR)
			empagliflozin/ linagliptin/metformin ER (Trijardy® XR)
Sulfonylureas			
chlorpropamide (Diabinese®)			
glimepiride (Amaryl®)			
glipizide (Glucotrol®)			
glipizide SR (Glucotrol XL®)			
glyburide (Diabeta®)			
glyburide micronized (Micronase®)			
tolbutamide (Orinase®)			
Thiazolidinediones			
pioglitazone (Actos®)		pioglitazone/ glimepiride (Duetact®)	
		pioglitazone/ metformin (Actoplus Met®, Actoplus Met XR®)	

Anti-Diabetic Medications*			
Tier-1	**Tier-2**	**Tier-3**	**Special PA**
		rosiglitazone (Avandia®)	
		rosiglitazone/ glimepiride (Avandaryl®)	
		rosiglitazone/ metformin (Avandamet®)	

*Tier structure based on supplemental rebate participation and/or National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
†Unique criteria applies.
DPP-4 = dipeptidyl peptidase-4; ER = extended-release; GLP-1 = glucagon-like peptide-1; PA = prior authorization; SGLT-2 = sodium-glucose cotransporter-2; soln = solution; SR = sustained-release; susp = suspension

Utilization Details of Non-Insulin Anti-Diabetic Medications: Calendar Year 2020

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
ALPHA-GLUCOSIDASE INHIBITOR PRODUCTS					
ACARBOSE TAB 25MG	37	16	$951.08	2.31	$25.70
ACARBOSE TAB 100MG	30	9	$1,113.89	3.33	$37.13
ACARBOSE TAB 50MG	23	6	$565.46	3.83	$24.59
SUBTOTAL	**90**	**31**	**$2,630.43**	**2.90**	**$29.23**
BIGUANIDE PRODUCTS					
METFORMIN TAB 500MG	17,132	5,607	$166,033.72	3.06	$9.69
METFORMIN TAB 1,000MG	12,326	3,771	$123,495.90	3.27	$10.02
METFORMIN TAB 500MG ER	5,240	1,901	$63,969.20	2.76	$12.21
METFORMIN TAB 850MG	839	266	$8,675.63	3.15	$10.34
METFORMIN TAB 750MG ER	623	216	$7,701.40	2.88	$12.36
METFORMIN SOL 500MG/5ML	32	7	$13,758.25	4.57	$429.95
RIOMET SOL 500MG/5ML	20	7	$9,995.96	2.86	$499.80
METFORMIN ER TAB 1,000MG	12	1	$2,442.34	12	$203.53
METFORMIN TAB 1,000MG ER	3	1	$1,565.31	3	$521.77
RIOMET SOL 500MG/5ML	1	1	$854.91	1	$854.91
SUBTOTAL	**36,228**	**11,778**	**$398,492.62**	**3.08**	**$11.00**
DPP-4 INHIBITOR PRODUCTS					
JANUVIA TAB 100MG	2,952	739	$2,394,986.63	3.99	$811.31
TRADJENTA TAB 5MG	1,327	197	$593,212.64	6.74	$447.03
JANUVIA TAB 50MG	682	177	$553,040.87	3.85	$810.91
JANUVIA TAB 25MG	193	54	$140,401.67	3.57	$727.47
ONGLYZA TAB 5MG	139	24	$82,929.19	5.79	$596.61
ALOGLIPTIN TAB 25MG	27	6	$6,885.03	4.5	$255.00
NESINA TAB 12.5MG	11	1	$4,426.60	11	$402.42

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
ONGLYZA TAB 2.5MG	2	1	$832.58	2	$416.29
ALOGLIPTIN TAB 6.25MG	1	1	$158.17	1	$158.17
SUBTOTAL	**5,334**	**1,200**	**$3,776,873.38**	**4.45**	**$708.08**
DPP-4 INHIBITOR/BIGUANIDE COMBINATION PRODUCTS					
JANUMET TAB 50-1,000MG	946	202	$620,716.67	4.68	$656.15
JANUMET XR TAB 50-1,000MG	299	56	$174,285.24	5.34	$582.89
JANUMET XR TAB 100-1,000MG	215	45	$145,964.03	4.78	$678.90
JANUMET TAB 50-500MG	103	34	$69,885.77	3.03	$678.50
JENTADUETO TAB 2.5-1,000MG	36	10	$30,514.46	3.6	$847.62
JANUMET XR TAB 50-500MG	18	5	$7,830.84	3.6	$435.05
KOMBIGLYZ XR TAB 5-1,000MG	14	3	$11,248.88	4.67	$803.49
JENTADUETO TAB 2.5-500MG	9	2	$5,398.75	4.5	$599.86
KOMBIGLYZ XR TAB 2.5-1,000MG	8	2	$4,679.02	4	$584.88
JENTADUETO TAB 2.5-850MG	4	1	$5,356.66	4	$1,339.17
KOMBIGLYZ XR TAB 5-500MG	1	1	$409.98	1	$409.98
SUBTOTAL	**1,653**	**361**	**$1,076,290.30**	**4.58**	**$651.11**
DPP-4 INHIBITOR/TZD COMBINATION PRODUCTS					
ALOGLIPTIN/PIOG TAB 25-30MG	3	1	$1,777.23	3	$592.41
OSENI TAB 25-30MG	1	1	$1,164.06	1	$1,164.06
SUBTOTAL	**4**	**2**	**$2,941.29**	**2**	**$735.32**
GLINIDE PRODUCTS					
NATEGLINIDE TAB 60MG	55	12	$1,638.37	4.58	$29.79
NATEGLINIDE TAB 120MG	41	11	$1,486.47	3.73	$36.26
REPAGLINIDE TAB 1MG	27	5	$571.86	5.4	$21.18
REPAGLINIDE TAB 2MG	8	2	$210.39	4	$26.30
REPAGLINIDE TAB 0.5MG	4	1	$90.44	4	$22.61
SUBTOTAL	**135**	**31**	**$3,997.53**	**4.35**	**$29.61**
GLP-1 AGONIST PRODUCTS					
VICTOZA INJ 18MG/3ML	4,379	961	$4,022,335.08	4.56	$918.55
TRULICITY INJ 1.5MG/0.5ML	1,598	254	$1,208,711.15	6.29	$756.39
BYDUREON PEN INJ 2MG	803	173	$598,239.29	4.64	$745.01
TRULICITY INJ 0.75MG/0.5ML	705	171	$531,418.48	4.12	$753.79
OZEMPIC INJ 2MG/1.5ML	281	78	$215,119.72	3.6	$765.55
OZEMPIC INJ 2MG/1.5ML	243	51	$188,758.86	4.76	$776.79
RYBELSUS TAB 3MG	32	17	$24,559.85	1.88	$767.50
BYDUREON BCISE INJ 2MG/0.85ML	29	4	$20,518.89	7.25	$707.55
BYETTA INJ 5MCG	28	14	$21,014.42	2	$750.52
BYETTA INJ 10MCG	24	6	$20,027.32	4	$834.47
TRULICITY INJ 3MG/0.2ML	15	10	$10,850.00	1.5	$723.33
RYBELSUS TAB 7MG	12	8	$9,199.08	1.5	$766.59
RYBELSUS TAB 14MG	9	4	$7,014.79	2.25	$779.42
TRULICITY INJ 4.5MG/0.5ML	3	3	$2,414.63	1	$804.88
SUBTOTAL	**8,161**	**1,754**	**$6,880,181.56**	**4.65**	**$843.06**

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
GLP-1 AGONIST/INSULIN COMBINATION PRODUCTS					
XULTOPHY INJ U-100/ML-3.6MG/ML	66	13	$68,491.44	5.08	$1,037.75
SOLIQUA INJ U-100/ML-33MCG/ML	64	13	$42,668.54	4.92	$666.70
SUBTOTAL	**130**	**26**	**$111,159.98**	**5**	**$855.08**
SGLT-2 INHIBITOR PRODUCTS					
JARDIANCE TAB 25MG	1,785	441	$1,426,082.56	4.05	$798.93
JARDIANCE TAB 10MG	1,249	374	$902,717.07	3.34	$722.75
FARXIGA TAB 10MG	693	199	$505,004.25	3.48	$728.72
FARXIGA TAB 5MG	366	112	$251,262.94	3.27	$686.51
INVOKANA TAB 300MG	284	45	$203,880.12	6.31	$717.89
INVOKANA TAB 100MG	108	29	$100,900.19	3.72	$934.26
STEGLATRO TAB 5MG	9	1	$2,624.94	9	$291.66
STEGLATRO TAB 15MG	7	3	$2,023.64	2.33	$289.09
SUBTOTAL	**4,501**	**1,204**	**$3,394,495.71**	**3.74**	**$754.16**
SGLT-2 INHIBITOR/BIGUANIDE COMBINATION PRODUCTS					
XIGDUO XR TAB 10-1000MG	127	25	$82,197.28	5.08	$647.22
SYNJARDY XR TAB 25-1000MG	98	33	$76,259.71	2.97	$778.16
SYNJARDY TAB 12.5-1000MG	89	23	$62,244.91	3.87	$699.38
XIGDUO XR TAB 5-1000MG	74	21	$48,487.29	3.52	$655.23
INVOKAMET TAB 150-1000MG	39	6	$22,595.38	6.5	$579.37
SYNJARDY XR TAB 12.5-1000MG	36	9	$14,819.15	4	$411.64
SYNJARDY TAB 5-1000MG	35	10	$18,597.07	3.5	$531.34
SYNJARDY XR TAB 5-1000MG	20	4	$8,656.11	5	$432.81
SYNJARDY TAB 5-500MG	16	4	$10,600.76	4	$662.55
XIGDUO XR TAB 10-500MG	12	3	$7,991.48	4	$665.96
XIGDUO XR TAB 2.5-1000MG	10	3	$5,291.22	3.33	$529.12
XIGDUO XR TAB 5-500MG	7	1	$3,511.50	7	$501.64
INVOKAMET XR TAB 50-1000MG	6	1	$5,738.99	6	$956.50
SYNJARDY TAB 12.5-500MG	3	3	$1,528.50	1	$509.50
SYNJARDY XR TAB 10-1000MG	1	1	$508.78	1	$508.78
SUBTOTAL	**573**	**147**	**$369,028.13**	**3.90**	**$644.03**
SULFONYLUREA PRODUCTS					
GLIPIZIDE TAB 10MG	2,279	676	$23,783.47	3.37	$10.44
GLIPIZIDE TAB 5MG	2,277	706	$21,680.87	3.23	$9.52
GLYBURIDE TAB 5MG	1,829	475	$26,711.05	3.85	$14.60
GLIMEPIRIDE TAB 4MG	1,178	322	$13,896.72	3.66	$11.80
GLIMEPIRIDE TAB 2MG	752	244	$7,977.12	3.08	$10.61
GLIPIZIDE ER TAB 10MG	739	243	$16,283.17	3.04	$22.03
GLIPIZIDE ER TAB 5MG	545	204	$8,962.86	2.67	$16.45
GLYBURIDE TAB 2.5MG	437	167	$5,724.93	2.62	$13.10
GLIMEPIRIDE TAB 1MG	409	139	$3,679.90	2.94	$9.00

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	CLAIMS/ MEMBER	COST/ CLAIM
GLIPIZIDE ER TAB 2.5MG	266	102	$4,187.93	2.61	$15.74
GLIPIZIDE XL TAB 10MG	77	37	$1,589.59	2.08	$20.64
GLYBURIDE TAB 1.25MG	74	25	$1,000.70	2.96	$13.52
GLIPIZIDE XL TAB 5MG	46	32	$825.74	1.44	$17.95
GLYBURIDE MCR TAB 3MG	41	12	$513.24	3.42	$12.52
GLYBURIDE MCR TAB 6MG	18	3	$242.34	6	$13.46
GLIPIZIDE XL TAB 2.5MG	10	6	$172.12	1.67	$17.21
GLYBURIDE MCR TAB 1.5MG	2	1	$6.12	2	$3.06
SUBTOTAL	**10,979**	**3,394**	**$137,237.87**	**3.23**	**$12.50**
SULFONYLUREA/BIGUANIDE COMBINATION PRODUCTS					
GLYB/METFORMIN TAB 5-500MG	182	33	$2,519.93	5.52	$13.85
GLIP/METFORMIN TAB 5-500MG	108	22	$2,796.60	4.91	$25.89
GLYB/METFORMIN TAB 2.5-500MG	46	13	$604.18	3.54	$13.13
GLIP/METFORMIN TAB 2.5-500MG	30	13	$1,022.61	2.31	$34.09
GLYB/METFORMIN TAB 1.25-250MG	1	1	$16.07	1	$16.07
SUBTOTAL	**367**	**82**	**$6,959.39**	**4.48**	**$18.96**
SGLT-2 INHIBITOR/DPP-4 INHIBITOR COMBINATION PRODUCTS					
GLYXAMBI TAB 25-5MG	129	25	$67,741.48	5.16	$525.13
GLYXAMBI TAB 10-5MG	70	13	$32,032.10	5.38	$457.60
QTERN TAB 10MG-5MG	2	2	$1,053.46	1	$526.73
STEGLUJAN TAB 5-100MG	1	1	$532.08	1	$532.08
SUBTOTAL	**202**	**41**	**$101,359.12**	**4.93**	**$501.78**
TZD PRODUCTS					
PIOGLITAZONE TAB 30MG	957	294	$12,599.59	3.26	$13.17
PIOGLITAZONE TAB 15MG	763	246	$9,152.43	3.1	$12.00
PIOGLITAZONE TAB 45MG	542	148	$7,714.82	3.66	$14.23
AVANDIA TAB 4MG	21	2	$5,621.69	10.5	$267.70
SUBTOTAL	**2,283**	**690**	**$35,088.53**	**3.31**	**$15.37**
TZD/BIGUANIDE COMBINATION PRODUCTS					
PIOG/MET TAB 15-850MG	39	4	$1,819.36	9.75	$46.65
PIOG/MET TAB 15-500MG	2	1	$114.74	2	$57.37
SUBTOTAL	**41**	**5**	**$1,934.10**	**8.2**	**$1.57**
SGLT-2/DPP-4 INHIBITOR/BIGUANIDE COMBINATION PRODUCTS					
TRIJARDY XR TAB 25-5-1000MG	5	1	$2,649.15	5	$529.83
SUBTOTAL	**5**	**1**	**$2,649.15**	**5**	**$529.83**
TOTAL	**70,686**	**13,314***	**$16,301,319.09**	**5.31**	**$230.62**

*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.
ER, XL, XR = extended-release; DPP-4 = dipeptidyl peptidase-4; GLP-1 = glucagon-like peptide 1; SGLT-2 = sodium-glucose cotransporter-2 inhibitor; TZD = thiazolidinedione; TAB = tablet; SOL = solution; INJ = injection; U = unit; GLYB = glyburide; PIOG = pioglitazone; MET = metformin; MCR = micronized

Utilization Details of Insulin Medications: Calendar Year 2020

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	UNITS/ DAY	COST/ CLAIM
INSULIN ASPART PRODUCTS					
NOVOLOG INJ FLEXPEN U-100/ML	6,358	1,903	$4,685,874.64	0.56	$737.00
NOVOLOG INJ U-100/ML	3,361	744	$1,975,617.20	0.71	$587.81
INSULIN ASPART INJ FLEXPEN U-100/ML	1,873	815	$692,267.70	0.5	$369.60
INSULIN ASPART INJ U-100/ML	499	215	$167,403.00	0.69	$335.48
NOVOLOG INJ PENFILL U-100/ML	478	103	$258,336.27	0.46	$540.45
FIASP FLEXPEN INJ TOUCH U-100/ML	143	27	$86,800.04	0.54	$606.99
INSULIN ASPART INJ PENFILL U-100/ML	34	13	$13,374.46	0.57	$393.37
FIASP INJ U-100/ML	21	5	$14,989.03	0.87	$713.76
FIASP PENFIL INJ U-100/ML	7	5	$3,945.65	0.4	$563.66
SUBTOTAL	**12,774**	**3,830**	**$7,898,607.99**	**0.58**	**$618.33**
INSULIN ASPART/NPH COMBINATION PRODUCTS					
NOVOLOG MIX INJ FLEX 70/30 U-100/ML	615	141	$602,349.52	0.76	$979.43
NOVOLOG MIX INJ 70/30 U-100/ML	144	45	$128,117.16	0.91	$889.70
INSULIN ASPART PROT INJ FLEX 70/30	49	20	$24,819.49	0.8	$506.52
INSULIN ASPART INJ 70/30	12	5	$5,508.58	0.55	$459.05
SUBTOTAL	**820**	**211**	**$760,794.75**	**0.78**	**$927.80**
INSULIN DEGLUDEC PRODUCTS					
TRESIBA FLEX INJ U-100/ML	1,050	232	$531,352.26	0.36	$506.05
TRESIBA FLEX INJ U-200/ML	1,037	200	$921,398.62	0.38	$888.52
TRESIBA INJ U-100/ML	7	4	$4,298.49	0.45	$614.07
SUBTOTAL	**2,094**	**436**	**$1,457,049.37**	**0.37**	**$695.82**
INSULIN DETEMIR PRODUCTS					
LEVEMIR INJ FLEXPEN U-100/ML	6,534	1,773	$3,955,238.27	0.47	$605.33
LEVEMIR INJ U-100/ML	2,132	530	$1,170,939.48	0.54	$549.22
SUBTOTAL	**8,666**	**2,303**	**$5,126,177.75**	**0.48**	**$591.53**
INSULIN GLARGINE PRODUCTS					
LANTUS SOLOSTAR INJ U-100/ML	14,081	3,562	$7,886,759.08	0.46	$560.10
LANTUS INJ U-100/ML	4,572	1,049	$2,351,648.80	0.56	$514.36
TOUJEO SOLOSTAR INJ U-300/ML	353	69	$323,430.28	0.33	$916.23
TOUJEO MAX INJ U-300/ML	155	25	$193,876.30	0.52	$1,250.81
BASAGLAR INJ U-100/ML	80	24	$30,174.39	0.51	$377.18
SEMGLEE SOLOSTAR U-100/ML	62	25	$9,274.11	0.57	$149.58
SEMGLEE INJ U-100/ML	21	15	$4,183.75	0.53	$199.23
SUBTOTAL	**19,324**	**4,769**	**$10,799,346.71**	**0.47**	**$558.86**
INSULIN GLULISINE PRODUCTS					
APIDRA INJ SOLOSTAR U-100/ML	261	71	$223,646.94	0.54	$856.88
APIDRA INJ U-100/ML	62	11	$36,563.80	0.87	$589.74
SUBTOTAL	**323**	**82**	**$260,210.74**	**0.58**	**$805.61**
INSULIN LISPRO PRODUCTS					
HUMALOG KWIK INJ U-100/ML PEN	4,116	1,225	$3,012,087.12	0.56	$731.80
HUMALOG INJ U-100/ML	2,802	660	$1,743,135.49	0.73	$622.10

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	UNITS/ DAY	COST/ CLAIM
HUMALOG JR INJ U-100/ML PEN	665	167	$353,015.77	0.43	$530.85
HUMALOG INJ U-100/ML CARTRIDGE	277	47	$189,406.18	0.63	$683.78
HUMALOG KWIK INJ U-200/ML PEN	94	19	$129,898.76	0.75	$1,381.90
INSULIN LISPRO INJ JR U-100/ML PEN	93	35	$24,460.55	0.46	$263.02
INSULIN LISPRO INJ U-100/ML PEN	28	4	$31,524.29	1.84	$1,125.87
INSULIN LISPRO INJ U-100/ML	3	3	$1,084.55	1.08	$361.52
SUBTOTAL	**8,078**	**2,160**	**$5,484,612.71**	**0.61**	**$678.96**
INSULIN LISPRO/NPH COMBINATION PRODUCTS					
HUMALOG MIX INJ 75/25 KWP U-100/ML	144	37	$139,598.78	0.77	$969.44
HUMALOG MIX SUS 75/25 U-100/ML	54	11	$42,288.31	0.67	$783.12
HUMALOG MIX INJ 50/50 KWP U-100/ML	15	5	$6,964.97	0.36	$464.33
HUMALOG MIX INJ 50/50 U-100/ML	5	1	$5,229.94	1.35	$1,045.99
INSULIN LISPRO INJ PROT U-100/ML	5	2	$2,689.05	0.74	$537.81
SUBTOTAL	**223**	**56**	**$196,771.05**	**0.72**	**$882.38**
NPH (N) INSULIN PRODUCTS					
HUMULIN N INJ U-100/ML	371	141	$99,002.73	0.55	$266.85
NOVOLIN N INJ U-100/ML	340	100	$81,693.89	0.49	$240.28
HUMULIN N INJ U-100 KWP	235	109	$126,163.07	0.4	$536.86
NOVOLIN N INJ RELION U-100/ML	229	70	$11,227.88	0.52	$49.03
NOVOLIN N INJ U-100/ML PEN	68	45	$9,902.23	0.36	$145.62
SUBTOTAL	**1,243**	**465**	**$327,989.80**	**0.48**	**$263.87**
REGULAR (R) INSULIN PRODUCTS					
HUMULIN R INJ U-100/ML	672	184	$199,977.73	0.62	$297.59
NOVOLIN R INJ U-100/ML	394	137	$81,183.00	0.46	$206.05
HUMULIN R INJ U-500/ML PEN	374	72	$517,658.70	0.48	$1,384.11
NOVOLIN R INJ RELION U-100/ML	254	72	$16,662.81	0.61	$65.60
NOVOLIN R INJ U-100/ML PEN	37	19	$6,998.45	0.39	$189.15
HUMULIN R INJ U-500/ML	9	3	$14,323.18	0.43	$1,591.46
SUBTOTAL	**1,740**	**487**	**$836,803.87**	**0.54**	**$480.92**
R/N INSULIN COMBINATION PRODUCTS					
HUMULIN INJ 70/30 U-100/ML	368	77	$132,620.24	0.75	$360.38
NOVOLIN INJ 70/30 U-100/ML	262	76	$110,665.60	0.77	$422.39
HUMULIN INJ 70/30 KWP U-100/ML	213	51	$155,680.48	0.6	$730.89
NOVOLIN 70/30 INJ RELION U-100/ML	195	50	$17,075.01	0.78	$87.56
NOVOLIN INJ 70/30 FLEXPEN U-100/ML	142	43	$39,485.21	0.64	$278.06
SUBTOTAL	**1,180**	**297**	**$455,526.54**	**0.001**	**$386.04**
TOTAL	**56,465**	**7,972***	**$33,603,891.28**	**0.52**	**$595.13**

*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.
INJ = injection; U = units; FLEX = FlexPen; PROT = protamine; KWIK = KwikPen; JR = junior; SUS = suspension; KWP= KwikPen

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Appendix N

Calendar Year 2020 Annual Review of Muscular Dystrophy Medications and 30-Day Notice to Prior Authorize Amondys 45™ (Casimersen), Viltepso® (Viltolarsen), and Vyondys 53™ (Golodirsen)

Oklahoma Health Care Authority
April 2021

Current Prior Authorization Criteria

Emflaza® (Deflazacort) Approval Criteria:

1. An FDA approved diagnosis of Duchenne muscular dystrophy (DMD); and
2. Member must be 2 years of age or older; and
3. Emflaza® must be prescribed by, or in consultation with, a prescriber who specializes in the treatment of DMD; and
4. Member must have a minimum 6-month trial of prednisone that resulted in inadequate effects or intolerable adverse effects that are not expected to occur with Emflaza®; and
5. A patient-specific, clinically significant reason why the member cannot use prednisone even when the tablets are crushed must be provided; and
6. Patients already established on deflazacort via the ACCESS DMD Program must also document a patient-specific, clinically significant reason why the member cannot use prednisone even when the tablets are crushed; and
7. For Emflaza® suspension, a patient-specific, clinically significant reason why the member cannot use the tablet formulation in the place of oral suspension even when the tablets are crushed must be provided; and
8. Prescriber must verify the member has had a baseline eye examination; and
9. The member's recent weight must be provided in order to authorize the appropriate amount of drug required according to package labeling; and
10. For the tablets, a quantity limit of 30 tablets per 30 days will apply and for the suspension, a quantity limit of 39mL (3 bottles) per 30 days will apply. Quantity limit override requests will be approved as appropriate based on the member's recent weight taken within the last 30 days.

Exondys 51® (Eteplirsen) Approval Criteria:

1. An FDA approved diagnosis of Duchenne muscular dystrophy (DMD) in members who have a confirmed mutation of the *DMD* gene that is amenable to exon 51 skipping; and
2. The member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to package labeling.

Utilization of Muscular Dystrophy Medications: Calendar Year 2020

Comparison of Calendar Years

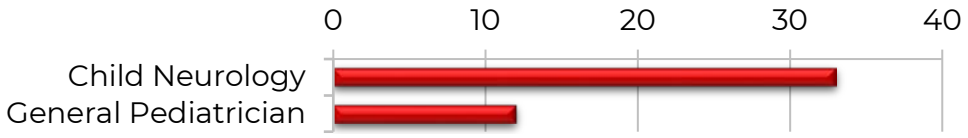
Calendar Year	*Total Members	Total Claims	Total Cost	Cost/ Claim	Cost/ Day	Total Units	Total Days
2019	2	13	$142,381.89	$10,952.45	$366.96	424	388
2020	5	45	$2,070,002.97	$46,000.07	$1,646.78	2,818	1,257
% Change	**150.00%**	**246.20%**	**1,353.80%**	**320.00%**	**348.80%**	**564.60%**	**224.00%**
Change	**3**	**32**	**$1,927,621.08**	**$35,047.62**	**$1,279.82**	**2,394**	**869**

*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

Demographics of Members Utilizing Muscular Dystrophy Medications

- Due to the limited number of members utilizing muscular dystrophy medications during calendar year 2020, detailed demographic information could not be provided.

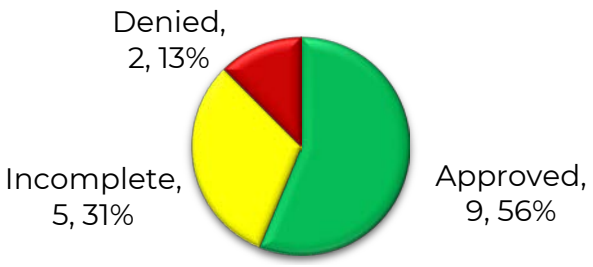
Top Prescriber Specialties of Muscular Dystrophy Medications by Number of Claims



Prior Authorization of Muscular Dystrophy Medications

There were 16 prior authorization requests submitted for muscular dystrophy medications during calendar year 2020. The following chart shows the status of the submitted petitions for calendar year 2020.

Status of Petitions



Market News and Updates[1,2,3,4,5,6,7,8,9,10]

Anticipated Patent Expiration(s):

- Vyondys 53™ (golodirsen injection): June 2025
- Amondys 45™ (casimersen injection): November 2030
- Viltepso® (viltolarsen injection): August 2031
- Exondys 51® (eteplirsen injection): March 2034

New U.S. Food and Drug Administration (FDA) Approval(s):

- **December 2019:** The FDA granted accelerated approval to Vyondys 53™ (golodirsen) injection for the treatment of Duchenne muscular dystrophy (DMD) patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping. Approximately 8% of patients with DMD have a mutation that is amenable to exon 53 skipping.
- **August 2020:** The FDA granted accelerated approval to Viltepso® (viltolarsen) injection for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping. This is the second FDA-approved targeted treatment for patients with this type of mutation.
- **February 2021:** The FDA granted approval to Amondys 45™ (casimersen) injection for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 45 skipping. This is the first FDA-approved targeted treatment for patients with this type of mutation. Approximately 8% of patients with DMD have a mutation that is amenable to exon 45 skipping.

News:

- **July 2019:** New research from 3 clinical studies indicated that Sarepta Therapeutics' Exondys 51® (eteplirsen) slows respiratory decline in DMD. Sarepta, along with Harvard Medical School, the Children's Hospital of Philadelphia, Nationwide Children's Hospital, the Paul D. Wellstone Muscular Dystrophy Cooperative Research Center, and Ohio State University published results from 3 studies in the *Journal of Neuromuscular Diseases*. These particular studies focused on respiratory function, comparing the patients receiving Exondys 51® to patients matched by age range, steroid use, and genotype from the Cooperative International Neuromuscular Research Group Duchenne Natural History Study (CINRG DNHS) global database. They studied eligible ambulatory DMD patients for at least 4 years and primary non-ambulatory DMD patients for 2 years, and an open-label multicenter study of ambulatory DMD patients 7 to 16 years of age is still ongoing. All 3 studies found significant slowing of respiratory decline in the patients receiving Exondys 51®, with consistent effects across all stages of the disease studied.

- **December 2019:** The FDA authorized marketing of the first test to aid in newborn screening for DMD, the GSP Neonatal Creatine Kinase-MM kit. This test works by measuring the concentration of creatine kinase-skeletal muscle (CK-MM). CK-MM is found in muscle tissue and enters the blood stream in increased amounts when there is muscle damage. This test measures the levels of CK-MM from the dried blood samples collected from the prick of a newborn's heel 24 to 48 hours after birth. Elevated levels of CK-MM detected by the kit may indicate presence of DMD. Results showing elevated CK-MM must be confirmed using other testing methods, such as muscle biopsies, genetic tests, and other laboratory tests. The FDA evaluated data from a clinical study of 3,041 newborns whose blood samples were tested for protein levels associated with DMD. In the study, the kit was able to accurately identify the 4 screened newborns with DMD-causing genetic mutations. The device manufacturer also tested 30 samples from newborns with clinically confirmed cases of DMD, all of which were correctly identified by the test. Risks associated with use of the kit include false negative test results. As part of the clinical study, the device manufacturer performed genetic testing on 173 patient samples including a subset of patients identified as negative by the GSP Neonatal Creatine Kinase-MM kit. Genetic testing on the negative samples did not identify any DMD-causing genetic variants, confirming the negative screening results by the GSP Neonatal Creatine Kinase-MM kit.
- **October 2020:** A study was performed using a data set with claims covering a majority of the United States population and linked electronic medical records (EMR) to assess health and resource utilization outcomes in treated and untreated DMD patients from 2011-2019. Eteplirsen-treated patients were identified by eteplirsen claims; DMD patient controls without eteplirsen were identified using codes in EMR. Treatment effect was evaluated over the full post-index period for both treated and control groups with non-missing baseline data. Regression analyses accounted for baseline characteristics, baseline medical care consumption, and follow-up duration in a 1:1 matched sample (283 for each group matched on age, disease progression stage, and medical events during baseline) and in a full sample analysis (314 treated and 648 control). Treated patients on average were 14.1 years of age at initiation. Eteplirsen claims were observed for a median of 13 months. Significant treatment effects of eteplirsen were observed on yearly average rates of emergency room visits (3.05 vs. 5.46, P=0.031), pulmonary management visits (1.56 vs. 2.44, P=0.039), and tracheostomy (0.25 vs. 1.13, P=0.015). Consistent results were also found in the full sample analysis (2.61 vs. 4.67, P=0.01 for emergency room

visits; 2.14 vs. 3.00, P=0.045 for pulmonary management visits; and 0.37 vs. 2.17, P=0.004 for tracheostomy).

Pipeline:

- **Translarna® (Ataluren):** Translarna® is an investigational treatment being developed by PTC Therapeutics for the treatment of DMD and Becker muscular dystrophy (BMD). Translarna® is designed to treat patients who have DMD or BMD caused by a nonsense mutation. In these patients, a nonsense mutation introduces a premature stop signal in the gene that causes the synthesis of the dystrophin protein in the cell to stop prematurely. This results in a truncated protein that cannot function normally and that is subsequently destroyed by the cell. Approximately 13% of DMD cases are caused by this type of mutation. Translarna® forces the cell to ignore this abnormal premature stop signal, enabling the production of the full-length, functional dystrophin protein. The FDA accepted a New Drug Application (NDA) for Translarna® in March 2017. In October 2017, the FDA announced its decision not to approve the NDA due to the lack of substantial evidence of Translarna®'s effectiveness and the need for an additional adequate and well-controlled clinical study to demonstrate the treatment's effectiveness. Following this setback, PTC and the FDA agreed that if dystrophin production was significantly increased in patients treated with Translarna® using new analytical methods, the results would be sufficient for review under accelerated approval. PTC would then have to confirm those findings in a larger, placebo-controlled study. Study results published in February 2021 indicated PTC hasn't succeeded in the first part of that plan. In the 18 patients who completed the study, dystrophin production increased 9%, but was not considered statistically significant. PTC also didn't specify how much dystrophin patients produced at the start of the study, making any benefit difficult to gauge. Nonetheless, PTC plans to go back to the FDA to discuss the dystrophin results and the totality of the existing clinical and real-world data to determine if there's a potential accelerated path to approval.
- **PF-06939926:** PF-06939926 uses an adeno-associated virus serotype 9 (AAV9) capsid to deliver a shortened version of the human *DMD* gene that encodes for a mini-dystrophin protein. Because the gene is too long to fit into the adenoviral vector, a shorter but still functional version of the gene is used for the therapy. The AAV9 capsid lets the therapy specifically target the muscles. A randomized, placebo-controlled Phase 3 study, called CIFFREO, is currently enrolling up to 99 boys with DMD, 4 to 7 years of age, at sites in Italy, Israel, and Spain, and is expected to expand to 55 sites in 15 countries. Patients will be randomly assigned to either a single intravenous (IV) infusion of PF-06939926 in the study's first year or to a placebo infusion. These groups

will switch in the second year, with those treated getting a single placebo infusion, and those initially given a placebo receiving the gene therapy. Nearly two-thirds of the boys will be given the gene therapy at the study's start, and all will be monitored for 5 years after treatment with PF-06939926.

Amondys 45™ (Casimersen) Product Summary[11]

Indication(s): Amondys 45™ is an antisense oligonucleotide indicated for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 45 skipping. This indication was approved under accelerated approval based on an increase in dystrophin production in skeletal muscle observed in patients treated with Amondys 45™. Continued approval for this indication may be contingent upon verification of a clinical benefit in confirmatory studies.

Dosing and Administration:

- Amondys 45™ is supplied as a 100mg/2mL (50mg/mL) preservative-free concentrated solution in single-dose vials (SDVs).
- Amondys 45™ requires dilution prior to administration.
- The recommended dose of Amondys 45™ is 30mg/kg administered once weekly as a 35 to 60 minute IV infusion.
- Prior to starting treatment with Amondys 45™, serum cystatin C, urine dipstick, and urine protein-to-creatinine ratio (UPCR) should be measured.

Contraindication(s): None

Safety:

- **Kidney Toxicity:** Kidney toxicity was observed in animals who received casimersen. Although kidney toxicity was not observed in the clinical studies with casimersen, kidney toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. Kidney function should be monitored in patients taking casimersen. Because of the effect of reduced skeletal muscle mass on creatinine measurements, creatinine may not be a reliable measure of kidney function in DMD patients. Serum cystatin C, urine dipstick, and UPCR should be measured before starting casimersen. Measuring glomerular filtration rate (GFR) before starting casimersen should also be considered. During treatment, urine dipstick should be monitored monthly, and serum cystatin C and UPCR should be monitored every 3 months. If a persistent increase in serum cystatin C or proteinuria is detected, the patient should be referred to a pediatric nephrologist for further evaluation.

- **Pregnancy:** There are no human or animal data available to assess the use of casimersen during pregnancy.
- **Lactation:** There are no human or animal data to assess the effect of casimersen on milk production, the presence of casimersen in milk, or the effects of casimersen on the breastfed infant.
- **Pediatric Use:** Casimersen is indicated for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 45 skipping, including pediatric patients.
- **Geriatric Use:** DMD is largely a disease of children and young adults; therefore, there is no experience with casimersen in geriatric DMD patients.
- **Renal Impairment:** Renal clearance of casimersen is decreased in non-DMD adults with renal impairment based on estimated GFR (eGFR). However, because of the effect of reduced skeletal muscle mass on creatinine measurements in DMD patients, no specific dosage adjustment can be recommended for DMD patients with renal impairment based on eGFR. Patients with known renal function impairment should be closely monitored during treatment with casimersen.

Adverse Reactions: The most common adverse reactions in casimersen-treated patients (incidence >20% and at least 5% higher than placebo) were upper respiratory tract infection, cough, pyrexia, headache, arthralgia, and oropharyngeal pain.

Efficacy: The effect of casimersen on dystrophin production was evaluated in a study in male DMD patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 45 skipping. This study is an ongoing, double-blind, placebo-controlled, multicenter study designed to evaluate the safety and efficacy of casimersen in ambulatory patients. The study is planned to enroll a total of 111 patients, 7 to 13 years of age, randomized to casimersen or placebo in a 2:1 ratio. Patients were required to have been on a stable dose of oral corticosteroids for at least 24 weeks prior to dosing with casimersen or placebo. Following the 96-week double-blind period, all patients began or are to begin an additional 48 week open-label treatment period. Interim efficacy was assessed based on change from baseline in the dystrophin protein level (measured as percent of the dystrophin level in healthy subjects, i.e., % of normal) at week 48. Interim results from 43 evaluable patients (N=27, casimersen; N=16, placebo) who had a muscle biopsy at week 48 of the double-blind period showed a statistically significant change from baseline to week 48 ($P<0.001$) in the casimersen-treated group.

Viltepso® (Viltolarsen) Product Summary[12]

Indication(s): Viltepso® is an antisense oligonucleotide indicated for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping. This indication is approved under accelerated approval based on an increase in dystrophin production in skeletal muscle observed in patients treated with Viltepso®. Continued approval for this indication may be contingent upon verification of a clinical benefit in confirmatory studies.

Dosing and Administration:

- Viltepso® is supplied as a 250mg/5mL (50mg/mL) preservative-free solution in SDVs.
- Viltepso® requires dilution prior to administration if the dosing volume required is <100mL.
- The recommended dose of Viltepso® is 80mg/kg administered once weekly as a 60 minute IV infusion.
- Prior to starting treatment with Viltepso®, serum cystatin C, urine dipstick, and UPCR should be measured.

Contraindication(s): None

Safety:

- **Kidney Toxicity:** Kidney toxicity was observed in animals who received viltolarsen. Although kidney toxicity was not observed in the clinical studies with viltolarsen, kidney toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. Kidney function should be monitored in patients taking viltolarsen. Because of the effect of reduced skeletal muscle mass on creatinine measurements, creatinine may not be a reliable measure of kidney function in DMD patients. Serum cystatin C, urine dipstick, and UPCR should be measured before starting viltolarsen. Measuring GFR before starting viltolarsen should also be considered. During treatment, urine dipstick should be monitored monthly, and serum cystatin C and UPCR should be monitored every 3 months. If a persistent increase in serum cystatin C or proteinuria is detected, the patient should be referred to a pediatric nephrologist for further evaluation.
- **Pregnancy:** There are no human or animal data available to assess the use of viltolarsen during pregnancy.
- **Lactation:** There are no human or animal data to assess the effect of viltolarsen on milk production, the presence of viltolarsen in milk, or the effects of viltolarsen on the breastfed infant.

- **Pediatric Use:** Viltolarsen is indicated for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping, including pediatric patients.
- **Geriatric Use:** DMD is largely a disease of children and young adults; therefore, there is no experience with viltolarsen in geriatric DMD patients.
- **Renal Impairment:** Viltolarsen has not been studied in patients with renal impairment. Viltolarsen is mostly excreted unchanged in the urine, and renal impairment may increase its exposure. However, because of the effect of reduced skeletal muscle mass on creatinine measurements in DMD patients, no specific dosage adjustment can be recommended for DMD patients with renal impairment based on eGFR. Patients with known renal function impairment should be closely monitored during treatment with viltolarsen.
- **Immunogenicity:** As with all oligonucleotides, there is potential for immunogenicity. For study 1, samples collected from all 16 patients at day 1 (pre-dose), week 5, week 13, and week 24 were assessed for anti-viltolarsen antibodies. All samples were determined to be antibody negative. For the same study, serum samples collected from all 16 patients at day 1 (pre-dose), week 13, and week 24 were analyzed for anti-dystrophin antibodies. Anti-dystrophin antibodies were detected in 1 out of 16 patients (6.25%) at weeks 13 and 24; however, at weeks 37, 49, 73, and 97, no anti-dystrophin antibodies were detected in the same patient. Further, this patient achieved a change from baseline in dystrophin levels that was comparable to the mean change in his dosage group (80mg/kg/week) and there were no adverse events reported with this antibody production.

Adverse Reactions: The most common adverse reactions (incidence ≥15% in patients treated with viltolarsen) were upper respiratory tract infection, injection site reaction, cough, and pyrexia.

Efficacy: The effect of viltolarsen on dystrophin production was evaluated in a study in DMD patients with a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping. The study was a multicenter, 2-period, dose-finding study. During the initial period (first 4 weeks) of the study, patients were randomized to viltolarsen or placebo. All patients then received 20 weeks of open-label viltolarsen 40mg/kg once weekly (N=8) or 80mg/kg once weekly (N=8). The study enrolled ambulatory male patients 4 to 9 years of age (median 7 years of age) on a stable corticosteroid regimen for at least 3 months. Efficacy was assessed based on change from baseline in dystrophin protein level (measured as percent of the dystrophin level in healthy subjects, i.e., % of normal) at week 25. Muscle biopsies were collected from patients at baseline and following 24 weeks of viltolarsen treatment. In patients who

received viltolarsen 80mg/kg once weekly, mean dystrophin levels increased from 0.6% [standard deviation (SD) 0.8] of normal at baseline to 5.9% (SD 4.5) of normal by week 25, with a mean change in dystrophin of 5.3% (SD 4.5) of normal levels (P=0.01). The median change from baseline was 3.8%. All patients demonstrated an increase in dystrophin levels over their baseline values.

Vyondys 53™ (Golodirsen) Product Summary[13]

Indication(s): Vyondys 53™ is an antisense oligonucleotide indicated for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping. This indication is approved under accelerated approval based on an increase in dystrophin production in skeletal muscle observed in patients treated with Vyondys 53™. Continued approval for this indication may be contingent upon verification of a clinical benefit in confirmatory studies.

Dosing and Administration:

- Vyondys 53™ is supplied as a 100mg/2mL (50mg/mL) preservative-free concentrated solution in SDVs.
- Vyondys 53™ requires dilution prior to administration.
- The recommended dose of Vyondys 53™ is 30mg/kg administered once weekly as a 35 to 60 minute IV infusion.
- Prior to starting treatment with Vyondys 53™, serum cystatin C, urine dipstick, and UPCR should be measured.

Contraindication(s): None

Safety:

- **Hypersensitivity Reactions:** Hypersensitivity reactions, including rash, pyrexia, pruritus, urticaria, dermatitis, and skin exfoliation have occurred in golodirsen-treated patients, some requiring treatment. If a hypersensitivity reaction occurs, appropriate medical treatment should be provided and slowing the infusion or interrupting the golodirsen therapy should be considered.
- **Kidney Toxicity:** Kidney toxicity was observed in animals who received golodirsen. Although kidney toxicity was not observed in the clinical studies with golodirsen, kidney toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. Kidney function should be monitored in patients taking golodirsen. Because of the effect of reduced skeletal muscle mass on creatinine measurements, creatinine may not be a reliable measure of kidney function in DMD patients. Serum cystatin C, urine dipstick, and UPCR should be measured before starting golodirsen. Measuring GFR before starting golodirsen should also be

considered. During treatment, urine dipstick should be monitored monthly, and serum cystatin C and UPCR should be monitored every 3 months. If a persistent increase in serum cystatin C or proteinuria is detected, the patient should be referred to a pediatric nephrologist for further evaluation.

- **Pregnancy:** There are no human or animal data available to assess the use of golodirsen during pregnancy.
- **Lactation:** There are no human or animal data to assess the effect of golodirsen on milk production, the presence of golodirsen in milk, or the effects of golodirsen on the breastfed infant.
- **Pediatric Use:** Golodirsen is indicated for the treatment of DMD in patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping, including pediatric patients.
- **Geriatric Use:** DMD is largely a disease of children and young adults; therefore, there is no experience with golodirsen in geriatric DMD patients.
- **Renal Impairment:** Renal clearance of golodirsen is decreased in non-DMD adults with renal impairment based on eGFR. However, because of the effect of reduced skeletal muscle mass on creatinine measurements in DMD patients, no specific dosage adjustment can be recommended for DMD patients with renal impairment based on eGFR. Patients with known renal function impairment should be closely monitored during treatment with golodirsen.

Adverse Reactions: The most common adverse reactions in golodirsen-treated patients (incidence ≥20% and higher than placebo) were headache, pyrexia, fall, abdominal pain, nasopharyngitis, cough, vomiting, and nausea.

Efficacy: The effect of golodirsen on dystrophin production was evaluated in a study in DMD patients with a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping. Part 1 of study 1 was a double-blind, placebo-controlled, dose-titration study in 12 DMD patients. Patients were randomized 2:1 to receive golodirsen or matching placebo. Golodirsen-treated patients received 4 escalating dose levels, ranging from 4mg/kg/week to 30mg/kg/week, by IV infusion for 2 weeks at each dose level. Part 2 of study 1 was a 168-week, open-label study assessing the efficacy and safety of golodirsen at a dose of 30mg/kg/week in the 12 patients enrolled in part 1, plus 13 additional treatment-naïve patients with DMD amenable to exon 53 skipping. At study entry (either in part 1 or part 2), patients had a median age of 8 years and were on a stable dose of corticosteroids for at least 6 months. Efficacy was assessed based on change from baseline in the dystrophin protein level (measured as percent of the dystrophin level in healthy subjects, i.e., % of normal) at week 48 of part 2. Muscle biopsies were obtained at baseline prior to treatment and at week 48 of part 2 in all golodirsen-treated

patients (N=25), and were analyzed for dystrophin protein level. Mean dystrophin levels increased from 0.10% (SD 0.07) of normal at baseline to 1.02% (SD 1.03) of normal by week 48 of study 1 part 2, with a mean change in dystrophin of 0.92% (SD 1.01) of normal levels (P<0.001); the median change from baseline was 0.88%.

Cost Comparison: DMD Exon-Skipping Therapies

Medication	Cost Per SDV	Cost Per 28 Days*	Cost Per Year*
Amondys 45™ (casimersen) 100mg/2mL	**$1,600**	**$48,000**	**$624,000**
Viltepso® (viltolarsen) 250mg/5mL	**$1,410**	**$45,120**	**$586,560**
Vyondys 53™ (golodirsen) 100mg/2mL	**$1,600**	**$48,000**	**$624,000**
Exondys 51® (eteplirsen) 100mg/2mL	$1,600	$48,000	$624,000

Costs do not reflect rebated prices or net costs. Costs based on National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
SDV = single-dose vial
*Cost per 28 days and cost per year based on FDA recommended dosing for a 25kg patient. Costs will vary due to weight-based dosing.

Recommendations

The College of Pharmacy recommends the prior authorization of Amondys 45™ (casimersen), Viltepso® (viltolarsen), and Vyondys 53™ (golodirsen) and updating the current Exondys 51® (eteplirsen) criteria with the following changes shown in red:

Amondys 45™ (Casimersen), Exondys 51® (Eteplirsen), Viltepso® (Viltolarsen), and Vyondys 53™ (Golodirsen) Approval Criteria:

1. An FDA approved diagnosis of Duchenne muscular dystrophy (DMD); and
2. Member must have a confirmed mutation of the *DMD* gene that is amenable to exon skipping for the requested medication (results of genetic testing must be submitted); and
3. Must be prescribed by a neurologist or specialist with expertise in the treatment of DMD (or an advanced care practitioner with a supervising physician who is a neurologist or specialist with expertise in the treatment of DMD); and
4. Prescriber must verify the member's renal function will be appropriately assessed prior to initiation of therapy and monitored during treatment; and
5. Member must be on a stable dose of a corticosteroid (at least 3 months in duration) or a patient-specific, clinically significant reason why corticosteroids are not appropriate for the member must be provided; and

6. A baseline assessment must be provided using at least 1 of the following exams as functionally appropriate:
   a. 6-minute walk test (6MWT); or
   b. Forced vital capacity percent predicted (FVCpp); and
7. The requested exon-skipping therapy will not be approved for concurrent use with any other exon-skipping therapies for DMD; and
8. Initial authorizations will be for the duration of 6 months, at which time the prescriber must verify the member is responding to the medication as demonstrated by clinically significant improvement or maintenance of function from pretreatment baseline status using the same exam as performed at baseline assessment; and
9. Subsequent approvals will be for the duration of 1 year. For yearly approvals, the prescriber must verify the member is responding to the medication as demonstrated by clinically significant improvement or maintenance of function from pretreatment baseline status using the same exam as performed at baseline assessment; and
10. The member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to package labeling.

Utilization Details of Muscular Dystrophy Medications: Calendar Year 2020

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER
VYONDYS 53 INJ 100MG/2ML	33	4	$1,966,776.53	$59,599.29	8.25
EMFLAZA TAB 30MG	12	1	$103,226.44	$8,602.20	12
TOTAL	**45**	**5***	**$2,070,002.97**	**$46,000.07**	**9**

INJ = injection; TAB = tablet
*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

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[2] U.S. FDA. FDA Grants Accelerated Approval to First Targeted Treatment for Rare Duchenne Muscular Dystrophy Mutation. Available online at: https://www.fda.gov/news-events/press-announcements/fda-grants-accelerated-approval-first-targeted-treatment-rare-duchenne-muscular-dystrophy-mutation. Issued 12/12/2019. Last accessed 03/19/2021.
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[10] PF-06939926. *Muscular Dystrophy News Today*. Available online at: https://musculardystrophynews.com/pf-06939926/. Last updated 01/14/2021. Last accessed 03/19/2021.
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[12] Viltepso® Prescribing Information. NS Pharma, Inc. Available online at: https://www.viltepso.com/prescribing-information. Last revised 08/2020. Last accessed 03/18/2021.
[13] Vyondys 53™ Prescribing Information. Sarepta Therapeutics, Inc. Available online at: https://www.vyondys53.com/static/patient/assets/Vyondys53_(golodirsen)_Prescribing_Information.pdf. Last revised 02/2021. Last accessed 03/18/2021.

Appendix O

Calendar Year 2020 Annual Review of Heart Failure (HF) Medications and 30-Day Notice to Prior Authorize Verquvo™ (Vericiguat)

Oklahoma Health Care Authority
April 2021

Current Prior Authorization Criteria

Corlanor® (Ivabradine) Approval Criteria:

1. An FDA approved indication of 1 of the following:
    a. To reduce the risk of hospitalization for worsening heart failure (HF) in adult members with stable, symptomatic chronic HF with reduced left ventricular ejection fraction (LVEF); or
    b. For the treatment of stable, symptomatic HF due to dilated cardiomyopathy (DCM) in members 6 months of age and older; and
2. For a diagnosis of worsening HF in adults:
    a. The prescriber must verify that the member has LVEF ≤35%; and
    b. The prescriber must verify that the member is in sinus rhythm with a resting heart rate ≥70 beats per minute (bpm); and
    c. The member must be on maximal/maximally tolerated doses of beta blockers or have a contraindication to beta blockers; and
3. For a diagnosis of DCM in members 6 months of age or older:
    a. The prescriber must verify that the member has LVEF ≤45%; and
    b. The prescriber must verify that the member is in sinus rhythm with a resting heart rate (HR) as follows:
        i. Age 6 to 12 months, HR ≥105 bpm; or
        ii. Age 1 to 3 years, HR ≥95 bpm; or
        iii. Age 3 to 5 years, HR ≥75 bpm; or
        iv. Age 5 to 18 years, HR ≥70 bpm; and
    c. The prescriber must verify that dose titration will be followed according to package labeling; and
    d. The member's recent weight must be provided on the prior authorization request in order to authorize the appropriate amount of drug required according to package labeling; and
4. Authorization of Corlanor® solution for members >40kg requires a patient-specific, clinically significant reason why Corlanor® tablets cannot be used; and
5. For Corlanor® tablets, a quantity limit of 60 tablets per 30 days will apply; and

6. For Corlanor® solution, a quantity limit of 112 ampules (4 boxes) per 28 days, or 560mL per 28 days, will apply.

Entresto® (Sacubitril/Valsartan) Approval Criteria:

1. An FDA approved diagnosis of chronic heart failure [New York Heart Association (NYHA) Class II, III, or IV]; and
2. A quantity limit of 60 tablets per 30 days will apply.

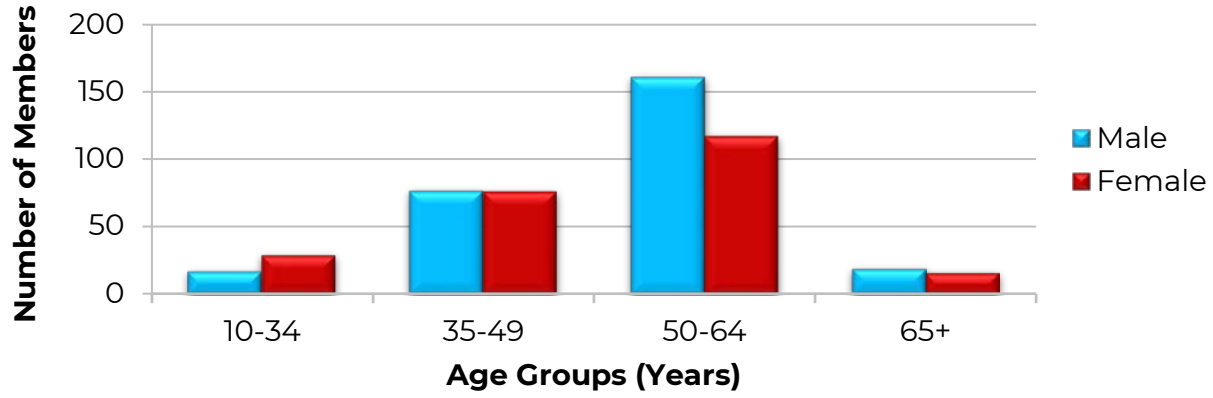
Utilization of HF Medications: Calendar Year 2020

Comparison of Calendar Years

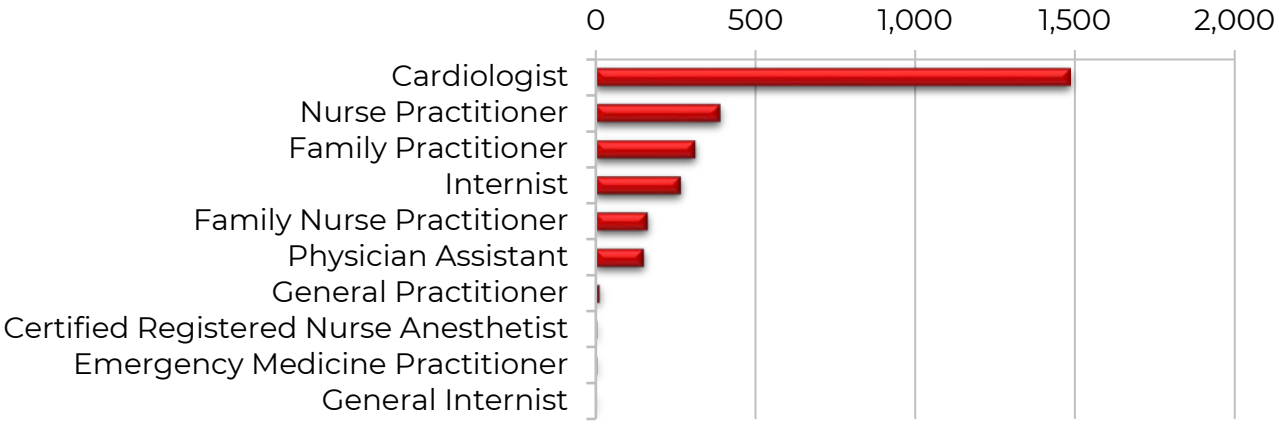
Calendar Year	*Total Members	Total Claims	Total Cost	Cost/ Claim	Cost/ Day	Total Units	Total Days
2019	393	2,001	$953,137.97	$476.33	$16.11	117,192	59,181
2020	512	2,823	$1,452,614.04	$514.56	$17.12	166,829	84,854
% Change	**30.30%**	**41.10%**	**52.40%**	**8.00%**	**6.30%**	**42.40%**	**43.40%**
Change	**119**	**822**	**$499,476.07**	**$38.23**	**$1.01**	**49,637**	**25,673**

*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

Demographics of Members Utilizing HF Medications

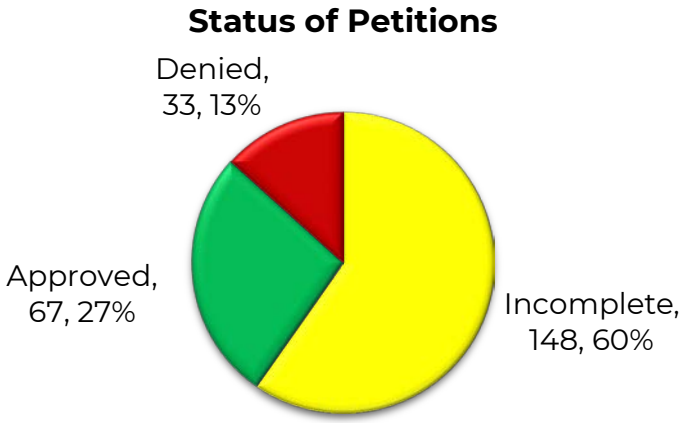


Top Prescriber Specialties of HF Medications by Number of Claims



Prior Authorization of HF Medications

There were 248 prior authorization requests submitted for HF medications during calendar year 2020. The following chart shows the status of the submitted petitions for calendar year 2020.



Market News and Updates[1,2,3,4,5,6,7,8,9,10,11,12]

Anticipated Patent Expiration(s):

- Corlanor® (ivabradine oral solution and tablet): August 2026
- Entresto® (sacubitril/valsartan tablet): November 2027
- Verquvo™ (vericiguat tablet): November 2032

New U.S. Food and Drug Administration (FDA) Approval(s) and Indication(s):

- **May 2020:** The FDA approved Farxiga® (dapagliflozin) for a new indication for the treatment of HF in patients with reduced ejection fraction (HFrEF). The approval for this indication was based on data from the Phase 3 DAPA-HF study, an international, multi-center, parallel-group, randomized, double-blinded study of 4,744 patients with HF and left ventricle ejection fraction (LVEF) ≤40%. The study enrolled patients with and without an additional diagnosis of type 2 diabetes mellitus (T2DM). The results of the study showed the addition of dapagliflozin to standard of care medications for HF resulted in a 26% risk reduction relative to placebo in the composite endpoint of cardiovascular (CV) death or worsening of HF (P<0.0001). Farxiga® is the first sodium-glucose cotransporter-2 (SGLT-2) inhibitor to be FDA approved for the treatment of HFrEF.
- **January 2021:** The FDA approved Verquvo™ (vericiguat), an oral soluble guanylate cyclase (sGC) stimulator, to reduce the risk of CV death and hospitalization for HF following a hospitalization for HF or need for outpatient intravenous (IV) diuretics in adult patients with symptomatic chronic HF and LVEF <45%. Vericiguat was studied as an

addition to standard guideline-based medical therapy for HF in adults with evidence of worsening HF, defined as a hospitalization for HF within the previous 6 months or the need for IV diuretics within the previous 3 months before randomization. Verquvo™ is the first sGC stimulator approved by the FDA for the treatment of HF.

- **February 2021:** The FDA approved Entresto® (sacubitril/valsartan) for an expanded indication to include some patients with HF with preserved EF (HFpEF). Previously, the FDA approved indication for Entresto® specified use in patients with HFrEF (LVEF ≤40%). The new expanded indication is to reduce the risk of CV death and hospitalization for HF in adult patients with chronic HF, and further states the benefits are most clearly evident in patients with LVEF below normal. Additionally, the updated indication states LVEF is a variable measure, so clinical judgement should be used in deciding whom to treat. The approval of this expanded indication was based on data from the Phase 3 PARAGON-HF study, a double-blind, parallel-group, active-controlled study comparing the efficacy and safety of sacubitril/valsartan vs. valsartan in patients with LVEF ≥45%. The primary endpoint was a composite of CV death or total hospitalizations for HF. The composite primary endpoint was not met in the study [rate ratio: 0.87; 95% confidence interval (CI): 0.75, 1.01; P=0.06]. However, prespecified subgroup analyses suggested a possible benefit in patients with an ejection fraction (EF) between 45% and 57% (rate ratio: 0.78; 95% CI: 0.64, 0.95) and in women (rate ratio: 0.73; 95% CI: 0.59, 0.90). Based on these results, the expanded indication allows for consideration of treatment for many additional patients with a LVEF that is below normal but does not meet the criteria for HFrEF.

News:

- **June 2020:** The results of a large, registry-based study conducted in Denmark were published comparing the impact of a HF diagnosis relative to a diagnosis of other CV or renal diseases on prognosis in patients with T2DM. In Denmark, all citizens have equal access to the health care system, and national administrative and health registries are available which allowed for near-complete follow-up of patients included in the study. Between 1998 and 2015, a total of 153,405 patients were identified with newly diagnosed T2DM and no prior CV or renal diagnoses [defined as HF, ischemic heart disease (IHD), stroke, chronic kidney disease (CKD), or peripheral artery disease (PAD)]. The median follow-up time was 9.7 years, over which time 69,201 patients (45.1%) received a CV or renal diagnosis. The study evaluated the absolute risk of death, relative risk of death, and decrease in lifespan within 5 years following a new CV or renal diagnosis in patients with T2DM relative to patients with T2DM who did not receive an additional diagnosis.

Although HF was the least frequent diagnosis, it was associated with the highest 5-year risk of death among patients with T2DM (47.6%; 95% CI: 44.8, 50.3). In comparison, the other CV and renal diagnoses were associated with a 5-year risk of death <35%. The 5-year relative risk of death was 3 times higher in patients who developed HF than in T2DM patients who did not receive an additional diagnosis (95% CI: 2.9, 3.1). The other CV and renal diagnoses were associated with a 5-year relative risk of death between 1.3 and 2.3 times higher than in patients who did not receive an additional diagnosis. Additionally, patients who developed HF had an average 11.7 month reduction (95% CI: 11.6, 11.8) in lifespan relative to those without an additional diagnosis. The other CV and renal diagnoses were associated with smaller decreases in lifespan of 1.6 to 6.9 months. Among the CV and renal diagnoses evaluated, the study demonstrated the development of HF is associated with the most unfavorable prognosis in patients with T2DM.

Pipeline:

- **Entresto® (Sacubitril/Valsartan):** Novartis is currently investigating the use of Entresto® for additional new indications. Phase 3 studies evaluating the use of sacubitril/valsartan for the treatment of post-acute myocardial infarction (Post-AMI) and Phase 2 studies for the treatment of non-obstructive hypertrophic cardiomyopathy (nHCM) are ongoing.
- **Farxiga® (Dapagliflozin):** In July 2020, the FDA granted Fast Track designation to Farxiga® for the reduction of risk of hospitalization for HF following an acute myocardial infarction (MI). AstraZeneca is conducting the Phase 3, double-blind DAPA-MI study to support this potential new indication. The study will assess the efficacy and safety of dapagliflozin to reduce the risk of hospitalization for HF and CV death in adults without T2DM following an acute MI and plans to enroll approximately 6,400 patients randomized to receive dapagliflozin 10mg once daily or placebo.
- **Jardiance® (Empagliflozin):** Lilly is conducting Phase 3 studies evaluating Jardiance® for the treatment of HF with both HFrEF and HFpEF. In June 2019, the FDA granted Fast Track designation to Jardiance® for the reduction of risk of CV death and hospitalization in patients with chronic HF. The Phase 3 EMPEROR-Reduced and EMPEROR-Preserved studies are ongoing to evaluate the efficacy and safety of empagliflozin for these potential new indications. The composite primary endpoint in both studies is the time to first event of adjudicated CV death or adjudicated hospitalization for HF. Additionally, in September 2020, the FDA granted Fast Track designation to Jardiance® for the prevention of hospitalization for HF

and to reduce the risk of mortality in patients who have had an acute MI, including patients with and without T2DM.

Verquvo™ (Vericiguat) Product Summary[13,14]

Indication(s): Verquvo™ (vericiguat) is indicated to reduce the risk of CV death and HF hospitalization following a hospitalization for HF or need for outpatient IV diuretics in adults with symptomatic chronic HF and LVEF <45%.

Boxed Warning: Embryo-Fetal Toxicity

- Verquvo™ should not be administered to a pregnant female because it may cause fetal harm.
- For females of reproductive potential, pregnancy should be excluded before the start of treatment. To prevent pregnancy, females of reproductive potential should use effective forms of contraception during treatment and for 1 month after discontinuing treatment with vericiguat.

How Supplied: 2.5mg, 5mg, and 10mg oral tablets

Dosing:

- Recommended starting dose is 2.5mg orally once daily with food
- Dose should be doubled approximately every 2 weeks to reach the target maintenance dose of 10mg once daily, as tolerated

Mechanism of Action: Vericiguat is an oral sGC stimulator. Intracellular cyclic guanosine monophosphate (cGMP) is catalyzed by sGC when nitric oxide (NO) binds to sGC. cGMP is an important second messenger involved in the regulation of vascular tone, cardiac contractility, and cardiac remodeling. Patients with HF have impaired synthesis of NO and subsequent decreases in cGMP activity. Vericiguat directly stimulates sGC and augments levels of intracellular cGMP, resulting in smooth muscle relaxation and vasodilation.

Contraindication(s):

- Concomitant use of other sGC stimulators (e.g., riociguat)
- Pregnancy

Safety:

- Embryo-Fetal Toxicity: Use of vericiguat is contraindicated during pregnancy. Vericiguat may cause fetal harm when administered to a pregnant woman based on data from animal studies. A pregnancy test should be obtained prior to initiating treatment with vericiguat and effective contraception should be used during treatment and for at least 1 month after the final dose of vericiguat. There is no data available with vericiguat use in pregnant women. In animal studies, oral

administration of vericiguat in pregnant rabbits at ≥4 times the human exposure with the maximum recommended human dose (MRHD) of 10mg resulted in malformations of the heart and major vessels and an increased number of abortions and resorptions.

- Lactation: There are no data available on the presence of vericiguat in human milk, the effects on the breastfed infant, or the effects on milk production. Vericiguat is present in the milk of lactating rats. Women should be advised not to breastfeed during treatment with vericiguat due to the potential for serious adverse reactions in breastfed infants.
- Drug Interactions: Vericiguat is contraindicated with concomitant use of other sGC stimulators (e.g., riociguat). Additionally, concomitant use with phosphodiesterase type 5 (PDE-5) inhibitors (e.g., sildenafil, tadalafil) is not recommended due to the potential for hypotension.
- Pediatric Use: The safety and effectiveness of vericiguat have not been established in pediatric patients.
- Geriatric Use: In a Phase 3 study of vericiguat, a total of 1,596 (63%) of patients treated with vericiguat were 65 years of age or older and 783 (31%) were 75 years of age or older. No differences in safety or efficacy of vericiguat were observed between patients 65 years of age or older relative to younger patients, but greater sensitivity of some older patients cannot be ruled out. There is no dosage adjustment required in geriatric patients.
- Renal Impairment: No dosage adjustment is recommended in patients with an estimated glomerular filtration rate (eGFR) ≥15mL/min/1.73m^2 who are not on dialysis. Vericiguat has not been studied in patients with an eGFR <15mL/min/1.73m^2 or on dialysis.
- Hepatic Impairment: No dosage adjustment is recommended in patients with mild or moderate hepatic impairment (Child-Pugh Class A or B). Vericiguat has not been studied in patients with severe hepatic impairment (Child-Pugh Class C).

Adverse Reactions: The most common adverse reactions in a Phase 3 study of 2,519 patients treated with vericiguat (occurring in ≥5% of patients treated with vericiguat and more commonly than with placebo) were hypotension and anemia.

Efficacy: The efficacy of Verquvo™ was established in the Phase 3 VICTORIA study, which was a randomized, parallel-group, placebo-controlled, double-blind, multi-center study comparing Verquvo™ to placebo. The study included 5,050 adult patients with symptomatic chronic HF [New York Heart Association (NYHA) Class II, III, or IV] and LVEF <45% with worsening HF, defined as HF hospitalization within the previous 6 months or use of outpatient IV diuretics for HF within 3 months before randomization. All patients included in the study received guideline-based medical therapy for

HF. At baseline, 93% of patients were receiving a beta blocker, 73% were receiving an angiotensin converting enzyme inhibitor (ACEI) or angiotensin receptor blocker (ARB), 70% of patients were receiving a mineralocorticoid receptor antagonist (MRA), and 15% were receiving a combination angiotensin receptor and neprilysin inhibitor (ARNI). Of the patients included in the study, 91% were receiving 2 or more HF medications and 60% of patients were receiving triple combination therapy with a beta blocker, an ACEI or ARB, and a MRA. Patients were randomized 1:1 to receive vericiguat or placebo at an initial dose of 2.5mg once daily. Doses were titrated to the target dose of 10mg once daily in a blinded manner, guided by evaluations of blood pressure and clinical symptoms. The median dose of vericiguat used in the study was 9.2mg, with 90.3% of patients receiving the 10mg target dose after approximately 12 months. The median follow-up time for assessment of the primary endpoint was 11 months.

- Primary Endpoint: The primary efficacy endpoint was the composite of time to first event of CV death or hospitalization for HF.
- Results: The study demonstrated a statistically significantly lower risk of the composite endpoint of CV death or HF hospitalization with vericiguat vs. placebo [hazard ratio (HR): 0.90; 95% CI: 0.82, 0.98; P=0.019]. Additionally, there was a 4.2% annualized absolute risk reduction (ARR) with vericiguat compared to placebo.

Cost Comparison:

Product	Cost Per Tablet	Cost Per Month*	Cost Per Year*
Verquvo™ (vericiguat) 2.5mg, 5mg, or 10mg tab	**$19.43**	**$582.90**	**$6,994.80**
Entresto® (sacubitril/valsartan) 49mg/51mg tab	$9.32	$559.20	$6,710.40
Corlanor® (ivabradine) 7.5mg tab	$7.94	$476.40	$5,716.80

tab = tablet
Costs do not reflect rebated prices or net costs. Costs based on National Average Drug Acquisition Costs (NADAC), Wholesale Acquisition Costs (WAC), or State Maximum Allowable Costs (SMAC).
*Cost per month and cost per year based on 1 tablet daily for Verquvo™ and 1 tablet twice daily for Entresto® and Corlanor®.

Recommendations

The College of Pharmacy recommends the prior authorization of Verquvo™ (vericiguat) with the following criteria:

Verquvo™ (Vericiguat) Approval Criteria:

1. An FDA approved indication to reduce the risk of cardiovascular death and hospitalization for heart failure (HF) in adults with all of the following:
   a. Chronic symptomatic HF [New York Heart Association (NYHA) Class II, III, or IV]; and
   b. Reduced left ventricular ejection fraction (LVEF) <45%; and

   c. Already receiving guideline-directed medical therapy for HF, as documented in member's pharmacy claims history; and
2. Member has evidence of worsening HF (decompensation) demonstrated by at least 1 of the following:
   a. Hospitalization for HF within the past 6 months; or
   b. Received outpatient intravenous (IV) diuretics within the past 3 months; and
3. Member must be 18 years of age or older; and
4. Member must not be taking concomitant soluble guanylate cyclase (sGC) stimulators (e.g., riociguat); and
5. Female members of reproductive potential must not be breastfeeding, must have a negative pregnancy test prior to initiation of therapy, and must agree to use effective contraception during treatment and for 1 month after the final dose of Verquvo™; and
6. Prescriber must agree to titrate to the target maintenance dose according to package labeling, as tolerated by the member; and
7. Initial approvals will be for the duration of 6 months. Compliance will be checked for continued approval every 6 months; and
8. A quantity limit of 30 tablets per 30 days will apply.

Utilization Details of HF Medications: Calendar Year 2020

PRODUCT UTILIZED	TOTAL CLAIMS	TOTAL MEMBERS	TOTAL COST	COST/ CLAIM	CLAIMS/ MEMBER	% COST
SACUBITRIL/VALSARTAN PRODUCTS						
ENTRESTO TAB 24-26MG	1,210	291	$609,478.80	$503.70	4.16	41.96%
ENTRESTO TAB 49-51MG	842	191	$441,516.30	$524.37	4.41	30.39%
ENTRESTO TAB 97-103MG	634	112	$333,710.69	$526.36	5.66	22.97%
SUBTOTAL	**2,686**	**499***	**$1,384,705.79**	**$515.53**	**5.38**	**95.33%**
IVABRADINE PRODUCTS						
CORLANOR TAB 5MG	100	22	$50,090.32	$500.90	4.55	3.45%
CORLANOR TAB 7.5MG	37	8	$17,817.93	$481.57	4.63	1.23%
SUBTOTAL	**137**	**28***	**$67,908.25**	**$495.68**	**4.89**	**4.67%**
TOTAL	**2,823**	**512***	**$1,452,614.04**	**$514.56**	**5.51**	**100.00%**

TAB = tablet
*Total number of unduplicated utilizing members.
Costs do not reflect rebated prices or net costs.

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[2] AstraZeneca. Farxiga® Approved in the U.S. for the Treatment of Heart Failure in Patients with Heart Failure with Reduced Ejection Fraction. Available online at: https://www.astrazeneca.com/media-centre/press-releases/2020/farxiga-approved-in-the-us-for-the-treatment-of-heart-failure-in-patients-with-heart-failure-with-reduced-ejection-fraction.html. Issued 05/06/2020. Last accessed 03/19/2021.
[3] Merck. Merck Announces U.S. Approval of Verquvo™ (Vericiguat). Available online at: https://www.merck.com/news/merck-announces-u-s-fda-approval-of-verquvo-vericiguat/. Issued 01/20/2021. Last accessed 03/15/2021.
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Appendix P

U.S. Food and Drug Administration (FDA) and Drug Enforcement Administration (DEA) Updates (additional information can be found at http://www.fda.gov/Drugs/default.htm)

FDA NEWS RELEASE

For Immediate Release: March 16, 2021

Coronavirus (COVID-19) Update: FDA Takes Steps to Streamline Path for COVID-19 Screening Tools, Provides Information to Help Groups Establishing Testing Programs

Testing remains an important cornerstone of our nation's fight against coronavirus disease 2019 (COVID-19). This includes schools, workplaces, communities, and other locations using testing to screen asymptomatic individuals who may still spread the virus. Screening involves testing asymptomatic individuals who do not have known or suspected exposure to COVID-19 in order to make individual decisions, such as whether an individual should participate in an activity, based on the test results.

The FDA is providing information for test developers about a streamlined path to emergency use authorization (EUA) for these important screening tools as well as information to help these groups as they set up testing programs. These actions complement those taken by the Centers for Disease Control and Prevention (CDC) and are not intended to replace CDC's testing or other public health guidance.

First, the FDA issued a new supplemental template for test developers seeking EUA of certain tests for screening with serial testing. Serial testing involves testing the same individual multiple times within a few days, and can increase chances of detecting asymptomatic infection that might not always show up with a single test. CDC recommends serial testing at least once per week, along with other mitigation measures, such as masking and social distancing, to reduce disease transmission. This template applies to developers of molecular and antigen tests, for use in serial testing programs, as well as at-home tests for use in a serial manner outside of a testing program, intended to detect severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from individuals without symptoms or other epidemiological reasons to suspect COVID-19 infection. This includes tests conducted in any location, including in a laboratory, at the point-of-care (POC), or even places such as a person's home or certain non-traditional sites such as offices, sporting venues, airports, schools, etc.

The FDA believes this effort will pave the way for further expanding the availability of tests authorized for screening asymptomatic individuals, help bolster existing and new testing programs, and increase consumer access to testing. As part of this new template for test developers, the agency provided recommendations aimed to streamline the authorization of screening tests with serial testing. The recommendations apply to test developers who seek an EUA from the FDA for certain screening tests prior to conducting certain performance evaluations with asymptomatic individuals. For example, in certain circumstances, a POC test or an at-home test could be authorized for over-the-counter (OTC) use without the need for validating its use in asymptomatic individuals prior to authorization. The FDA believes that evidence of a test's strong performance in symptomatic patients combined with serial testing can mitigate the risk of false results when testing asymptomatic individuals.

Additionally, the FDA issued a fact sheet that outlines considerations for selecting a test for use in a screening testing program. The fact sheet will help schools, workplaces,

communities, and other locations as they are selecting a test for screening and help them understand the difference between tests used for diagnosis of suspected COVID-19 compared to those used for screening asymptomatic individuals.

FDA NEWS RELEASE

For Immediate Release: March 5, 2021

COVID-19 Update: FDA Issues Authorization for First Molecular Non-Prescription, At-Home Test

The FDA issued an EUA for the Cue COVID-19 Test for Home and OTC Use (Cue OTC Test). The product is a molecular nucleic acid amplification test (NAAT) that is intended to detect genetic material from SARS-CoV-2 virus present in the nostrils. The test is the first molecular test authorized for at-home use without a prescription.

Cue OTC Test is authorized for non-prescription home use for the qualitative detection of nucleic acid from SARS-CoV-2 in anterior nasal swab specimens collected with the Cue Sample Wand. This test is intended for use in adults (self-swabbing) or children 2 years of age or older (swabbed by an adult) with or without symptoms or other epidemiological reasons to suspect COVID-19.

The authorized test includes: the single-use Cue COVID-19 Test Cartridge, the single-use Cue Sample Wand nasal swab, the Cue Cartridge Reader (used by the Cue Health Monitoring System, provided separately), and the Cue Health Mobile Application (App) that is downloaded onto compatible mobile smart devices, like a smart phone. The reusable, battery-operated Cue Cartridge Reader runs the Cue Test Cartridge and communicates results directly to the Cue Health App in about 20 minutes. The mobile application requires individuals to create an account, and in the future will be updated to include capability to report test results as appropriate to public health authorities to monitor disease prevalence.

Cue OTC Test Use correctly identified 96% of positive samples from individuals known to have symptoms and correctly identified 100% of positive samples from individuals without symptoms. Cue Health expects to produce more than 100,000 tests per day by summer 2021.

The FDA has authorized >330 tests and collection kits for a variety of uses, users and locations to provide a wide array of test options. The FDA has also prioritized review and authorization of EUA requests taking into account a variety of factors, as discussed in the EUA of Medical Products and Related Authorities Guidance, such as the public health need for the product and the availability of the product, with the goal of expanding overall US testing capacity and patient access to tests. The FDA has, for example, prioritized review of EUA requests for tests where authorization would increase testing accessibility (e.g., POC tests, home collection tests, and at-home tests) or would significantly increase testing capacity (e.g., tests that reduce reliance on test supplies and high-throughput, widely distributed tests). Tests with EUA authorization can be found on the FDA's website at In Vitro Diagnostic EUAs.

FDA NEWS RELEASE

For Immediate Release: March 1, 2021

COVID-19 Update: FDA Issues Authorization for Quidel QuickVue At-Home COVID-19 Test

The FDA issued an EUA for the Quidel QuickVue At-Home COVID-19 Test, another antigen test where certain individuals can rapidly collect and test their sample at home, without needing to send a sample to a laboratory for analysis.

The QuickVue At-Home COVID-19 Test is authorized for prescription home use with self-collected anterior nasal swabs from individuals ages 14 years and older or individuals ages 8 years and older with swabs collected by an adult. The test is authorized for individuals suspected of COVID-19 by their health care provider within the first 6 days of symptom onset.

In addition to this new prescription home test, Quidel was also issued an EUA in December 2020 for their QuickVue SARS Antigen Test which is authorized for use in laboratories certified under the Clinical Laboratory Improvement Amendments (CLIA) to perform high, moderate, or waived complexity tests, as well as for POC testing by facilities operating under a CLIA Certificate of Waiver.

FDA NEWS RELEASE

For Immediate Release: February 27, 2021

FDA Issues Emergency Use Authorization for Third COVID-19 Vaccine

The FDA issued an EUA for the third vaccine for the prevention of COVID-19 caused by SARS-CoV-2. The EUA allows the Janssen COVID-19 vaccine to be distributed in the United States for use in individuals 18 years of age and older.

The FDA has determined that the Janssen COVID-19 vaccine has met the statutory criteria for issuance of an EUA. The totality of the available data provides clear evidence that the Janssen COVID-19 vaccine may be effective in preventing COVID-19. The data also show that the vaccine's known and potential benefits outweigh its known and potential risks, supporting the company's request for the vaccine's use in people 18 years of age and older. In making this determination, the FDA is assuring the public and medical community that it has conducted a thorough evaluation of the available safety, effectiveness, and manufacturing quality information.

The Janssen COVID-19 vaccine is manufactured using a specific type of virus called adenovirus type 26 (Ad26). The vaccine uses Ad26 to deliver a piece of the DNA that is used to make the distinctive "spike" protein of the SARS-CoV-2 virus. While adenoviruses are a group of viruses that are relatively common, Ad26, which can cause cold symptoms and pink eye, has been modified for the vaccine so that it cannot replicate in the human body to cause illness. After a person receives this vaccine, the body can temporarily make the spike protein, which does not cause disease, but triggers the immune system to learn to react defensively, producing an immune response against SARS-CoV-2.

FDA Evaluation of Available Safety Data

The Janssen COVID-19 vaccine is administered as a single dose. The available safety data to support the EUA include an analysis of 43,783 participants enrolled in an ongoing randomized, placebo-controlled study being conducted in South Africa, certain countries in South America, Mexico, and the United States. The participants, 21,895 of whom received the vaccine and 21,888 of whom received saline placebo, were followed for a median of 8 weeks after vaccination. The most commonly reported side effects were pain at the injection site, headache, fatigue, muscle aches, and nausea. Most of these side effects were mild-to-moderate in severity and lasted 1-2 days.

As part of the authorization, the FDA notes that it is mandatory for Janssen Biotech, Inc. and vaccination providers to report the following to the Vaccine Adverse Event Reporting System (VAERS) for Janssen COVID-19 vaccine: serious adverse events, cases of multisystem inflammatory syndrome, and cases of COVID-19 that result in hospitalization or death.

It is also mandatory for vaccination providers to report all vaccine administration errors to VAERS for which they become aware and for Janssen Biotech, Inc. to include a

summary and analysis of all identified vaccine administration errors in monthly safety reports submitted to the FDA.

FDA Evaluation of Available Effectiveness Data

The effectiveness data to support the EUA include an analysis of 39,321 participants in the ongoing randomized, placebo-controlled study being conducted in South Africa, certain countries in South America, Mexico, and the United States who did not have evidence of SARS-CoV-2 infection prior to receiving the vaccine. Among these participants, 19,630 received the vaccine and 19,691 received saline placebo. Overall, the vaccine was approximately 67% effective in preventing moderate-to-severe/critical COVID-19 occurring at least 14 days after vaccination and 66% effective in preventing moderate-to-severe/critical COVID-19 occurring at least 28 days after vaccination.

Additionally, the vaccine was approximately 77% effective in preventing severe/critical COVID-19 occurring at least 14 days after vaccination and 85% effective in preventing severe/critical COVID-19 occurring at least 28 days after vaccination.

There were 116 cases of COVID-19 in the vaccine group that occurred at least 14 days after vaccination, and 348 cases of COVID-19 in the placebo group during this time period. There were 66 cases of COVID-19 in the vaccine group that occurred at least 28 days after vaccination and 193 cases of COVID-19 in the placebo group during this time period. Starting 14 days after vaccination, there were 14 severe/critical cases in the vaccinated group versus 60 in the placebo group, and starting 28 days after vaccination, there were 5 severe/critical in the vaccine group versus 34 cases in the placebo group.

At this time, data are not available to determine how long the vaccine will provide protection, nor is there evidence that the vaccine prevents transmission of SARS-CoV-2 from person to person.

FDA NEWS RELEASE

For Immediate Release: February 26, 2021

FDA Approves First Treatment for Molybdenum Cofactor Deficiency Type A

The FDA approved Nulibry™ (fosdenopterin) for injection to reduce the risk of death due to molybdenum cofactor deficiency type A, a rare, genetic, metabolic disorder that typically presents in the first few days of life, causing intractable seizures, brain injury, and death.

Patients with molybdenum cofactor deficiency type A experience severe and rapidly progressive neurologic damage including intractable seizures, feeding difficulties, and muscle weakness from the accumulation of toxic sulfite metabolites in the central nervous system. Most patients die in early childhood from infections. Before today's approval, the only treatment options included supportive care and therapies directed towards the complications arising from the disease.

Patients with molybdenum cofactor deficiency type A cannot produce a substance known as cyclic pyranopterin monophosphate (cPMP). Nulibry™ is an intravenous (IV) medication that replaces the missing cPMP. The effectiveness of Nulibry™ for the treatment of molybdenum cofactor deficiency type A was demonstrated in 13 treated patients compared to 18 matched, untreated patients. The patients treated with Nulibry™ had a survival rate of 84% at 3 years, compared to 55% for the untreated patients.

The most common side effects included complications related to the IV line, fever, respiratory infections, vomiting, gastroenteritis, and diarrhea.

Phototoxicity was seen in animals, so patients treated with Nulibry™ should avoid exposure to sunlight and wear sunscreen, protective clothing, and sunglasses when exposed to the sun.

The FDA granted this application Priority Review, Breakthrough Therapy, and Orphan Drug designations. The sponsor is also receiving a Rare Pediatric Disease Priority Review Voucher.

FDA NEWS RELEASE

For Immediate Release: February 19, 2021

FDA Warns 10 Companies for Illegally Selling Dietary Supplements Claiming to Treat Depression and Other Mental Health Disorders

The FDA announced warning letters to 10 companies for illegally selling dietary supplements that claim to cure, treat, mitigate, or prevent depression and other mental health disorders, in violation of the Federal Food, Drug, and Cosmetic (FD&C) Act. The warning letters were issued to: Enlifta LLC; Lifted Naturals; Mountain Peak Nutritionals; SANA Group LLC.; Wholesome Wellness; Dr. Garber's Natural Solutions; ProHealth Inc.; Blossom Nature LLC; FDC Nutrition Inc.; and Silver Star Brands, Inc.

Under the FD&C Act, products intended to cure, treat, mitigate, or prevent disease are drugs and are subject to the requirements that apply to drugs, even if they are labeled as dietary supplements. Unlike drugs approved by the FDA, the agency has not evaluated whether the unapproved products subject to the warning letters are effective for their intended use, what the proper dosage might be, how they could interact with FDA-approved drugs or other substances, or whether they have dangerous side effects or other safety concerns.

In general, consumers should be cautious of products marketed and sold online with unproven claims to prevent, treat, mitigate, or cure diseases. The FDA advises consumers to talk to their doctor, pharmacist, or other health care professional before deciding to purchase or use any dietary supplement or drug. For example, some supplements might interact with medicines or other supplements. Also, if claims sound too good to be true, they probably are.

If a consumer thinks that a product might have caused a reaction or an illness, they should immediately stop using the product and contact their health care provider. The FDA also encourages health care professionals and consumers to report adverse reactions associated with FDA-regulated products to the FDA using MedWatch or the Safety Reporting Portal.

The FDA has requested responses from the companies within 15 working days stating how they will address these issues, or providing their reasoning and supporting information as to why they think the products are not in violation of the law. Failure to correct violations promptly may result in legal action, including product seizure and/or injunction.

Current Drug Shortages Index (as of March 18, 2021):

The information provided in this section is provided voluntarily to the FDA by manufacturers and is not specific to Oklahoma.

Acetazolamide Injection	***Currently in Shortage***
Amifostine Injection	***Currently in Shortage***
Amino Acids	***Currently in Shortage***
Amoxapine Tablets	***Currently in Shortage***

Amphetamine Aspartate; Amphetamine Sulfate; Dextroamphetamine Saccharate; Dextroamphetamine Sulfate Tablets	***Currently in Shortage***
Anagrelide Hydrochloride Capsules	***Currently in Shortage***
Asparaginase Erwinia Chrysanthemi (Erwinaze)	***Currently in Shortage***
Atropine Sulfate Injection	***Currently in Shortage***
Atropine Sulfate Ophthalmic Ointment	***Currently in Shortage***
Azacitidine for Injection	***Currently in Shortage***
Belatacept (Nulojix) Lyophilized Powder for Injection	***Currently in Shortage***
Bumetanide Injection, USP	***Currently in Shortage***
Bupivacaine Hydrochloride and Epinephrine Injection, USP	***Currently in Shortage***
Bupivacaine Hydrochloride Injection, USP	***Currently in Shortage***
Calcitriol Injection USP 1MCG /ML	***Currently in Shortage***
Calcium Disodium Versenate Injection	***Currently in Shortage***
Capreomycin Injection, USP	***Currently in Shortage***
Cefazolin Injection	***Currently in Shortage***
Cefotaxime Sodium Injection	***Currently in Shortage***
Cefotetan Disodium Injection	***Currently in Shortage***
Cefoxitin for Injection, USP	***Currently in Shortage***
Ceftazidime and Avibactam (AVYCAZ®) for Injection, 2 grams/0.5 grams	***Currently in Shortage***
Ceftolozane and Tazobactam (Zerbaxa) Injection	***Currently in Shortage***
Cisatracurium Besylate Injection	***Currently in Shortage***
Continuous Renal Replacement Therapy (CRRT) Solutions	***Currently in Shortage***
Cyclopentolate Ophthalmic Solution	***Currently in Shortage***
Cysteamine Hydrochloride Ophthalmic Solution	***Currently in Shortage***
Desmopressin Acetate (Stimate) Nasal Spray	***Currently in Shortage***
Dexamethasone Sodium Phosphate Injection	***Currently in Shortage***
Dexmedetomidine Injection	***Currently in Shortage***
Diltiazem Hydrochloride Injection	***Currently in Shortage***
Dimercaprol (Bal in Oil) Injection USP	***Currently in Shortage***
Dobutamine Hydrochloride Injection	***Currently in Shortage***
Dopamine Hydrochloride Injection	***Currently in Shortage***
Dorzolamide Hydrochloride and Timolol Maleate (Cosopt) Ophthalmic Solution	***Currently in Shortage***
Dorzolamide Hydrochloride Ophthalmic Solution	***Currently in Shortage***
Echothiophate Iodide (Phospholine Iodide) Ophthalmic Solution	***Currently in Shortage***
Enalaprilat Injection, USP	***Currently in Shortage***
Epinephrine Injection, 0.1 mg/mL	***Currently in Shortage***
Epinephrine Injection, Auto-Injector	***Currently in Shortage***

Erythromycin Ophthalmic Ointment	***Currently in Shortage***
Etomidate Injection	***Currently in Shortage***
Famotidine Injection	***Currently in Shortage***
Famotidine Tablets	***Currently in Shortage***
Fentanyl Citrate (Sublimaze) Injection	***Currently in Shortage***
Floxuridine for Injection, USP	***Currently in Shortage***
Fluorescein Strips	***Currently in Shortage***
Fluvoxamine ER Capsules	***Currently in Shortage***
Furosemide Injection, USP	***Currently in Shortage***
Gemifloxacin Mesylate (Factive) Tablets	***Currently in Shortage***
Guanfacine Hydrochloride Tablets	***Currently in Shortage***
Heparin Sodium and Sodium Chloride 0.9% Injection	***Currently in Shortage***
Histreline Acetate Implant	***Currently in Shortage***
Hydralazine Hydrochloride Injection, USP	***Currently in Shortage***
Hydrocortisone Tablets, USP	***Currently in Shortage***
Hydromorphone Hydrochloride Injection, USP	***Currently in Shortage***
Hydroxypropyl (Lacrisert) Cellulose Ophthalmic Insert	***Currently in Shortage***
Imipenem and Cilastatin for Injection, USP	***Currently in Shortage***
Isoniazid Injection USP	***Currently in Shortage***
Ketamine Injection	***Currently in Shortage***
Ketoprofen Capsules	***Currently in Shortage***
Ketorolac Tromethamine Injection	***Currently in Shortage***
Letermovir (Prevymis) Injection	***Currently in Shortage***
Leucovorin Calcium Lyophilized Powder for Injection	***Currently in Shortage***
Leuprolide Acetate Injection	***Currently in Shortage***
Lidocaine Hydrochloride (Xylocaine) and Dextrose Injection Solution-Premix Bags	***Currently in Shortage***
Lidocaine Hydrochloride (Xylocaine) Injection	***Currently in Shortage***
Lidocaine Hydrochloride (Xylocaine) Injection with Epinephrine	***Currently in Shortage***
Lithium Oral Solution	***Currently in Shortage***
Lorazepam Injection, USP	***Currently in Shortage***
Loxapine Capsules	***Currently in Shortage***
Methadone Hydrochloride Injection	***Currently in Shortage***
Methyldopa Tablets	***Currently in Shortage***
Midazolam Injection, USP	***Currently in Shortage***
Misoprostol Tablets	***Currently in Shortage***
Morphine Sulfate Injection	***Currently in Shortage***
Multi-Vitamin Infusion (Adult and Pediatric)	***Currently in Shortage***
Nalbuphine Hydrochloride Injection	***Currently in Shortage***
Nefazodone Hydrochloride Tablets	***Currently in Shortage***

Nizatidine Capsules	***Currently in Shortage***
Ondansetron Hydrochloride Injection	***Currently in Shortage***
Oxytocin Injection, USP Synthetic	***Currently in Shortage***
Pantoprazole Sodium for Injection	***Currently in Shortage***
Parathyroid Hormone (Natpara) Injection	***Currently in Shortage***
Physostigmine Salicylate Injection, USP	***Currently in Shortage***
Pindolol Tablets	***Currently in Shortage***
Potassium Acetate Injection, USP	***Currently in Shortage***
Promethazine (Phenergan) Injection	***Currently in Shortage***
Propofol Injectable Emulsion	***Currently in Shortage***
Rifampin Injection	***Currently in Shortage***
Rifapentine Tablets	***Currently in Shortage***
Ropivacaine Hydrochloride Injection	***Currently in Shortage***
Sclerosol Intrapleural Aerosol	***Currently in Shortage***
Sertraline Hydrochloride Oral Solution, USP	***Currently in Shortage***
Sincalide (Kinevac) Lyophilized Powder for Injection	***Currently in Shortage***
Sodium Acetate Injection, USP	***Currently in Shortage***
Sodium Bicarbonate Injection, USP	***Currently in Shortage***
Sodium Chloride 23.4% Injection	***Currently in Shortage***
Sodium Chloride Injection USP, 0.9% Vials and Syringes	***Currently in Shortage***
Succimer (Chemet) Capsules	***Currently in Shortage***
Sulfasalazine Tablets	***Currently in Shortage***
Tacrolimus Capsules	***Currently in Shortage***
Technetium Tc99m Succimer Injection (DMSA)	***Currently in Shortage***
Teprotumumab-trbw	***Currently in Shortage***
Thiothixene Capsules	***Currently in Shortage***
Timolol Maleate Ophthalmic Gel Forming Solution	***Currently in Shortage***
Timolol Maleate Ophthalmic Solution	***Currently in Shortage***
Tobramycin Lyophilized Powder for Injection	***Currently in Shortage***
Trimethobenzamide Hydrochloride Capsules	***Currently in Shortage***
Valproate Sodium Injection, USP	***Currently in Shortage***
Vecuronium Bromide for Injection	***Currently in Shortage***
Zinc Acetate Capsules	***Currently in Shortage***