
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Filing at a Glance

Company:	BCBSVT
Product Name:	2021 BCBSVT AHP Rating Program Filing
State:	VermontGMCB
TOI:	ML02 Multi-Line - Other
Sub-TOI:	ML02.000 Multi-Line - Other
Filing Type:	GMCB Trend / Admin Charge
Date Submitted:	04/30/2020
SERFF Tr Num:	BCVT-132360219
SERFF Status:	Closed-Approved
State Tr Num:	
State Status:	
Co Tr Num:	
Implementation	On Approval
Date Requested:	
Author(s):	Jude Daye, Martine Brisson-Lemieux, Andrew Proulx, Matthew Goodrich
Reviewer(s):	Thomas Crompton (primary), David Dillon, Jacqueline Lee, Christina McLaughlin, Amerin Aborjaily, Michael Barber
Disposition Date:	08/28/2020
Disposition Status:	Approved
Implementation Date:	01/01/2021
State Filing Description:	

State: VermontGMCB **Filing Company:** BCBSVT
TOI/Sub-TOI: ML02 Multi-Line - Other/ML02.000 Multi-Line - Other
Product Name: 2021 BCBSVT AHP Rating Program Filing
Project Name/Number: /

General Information

Project Name: Status of Filing in Domicile:
Project Number: Date Approved in Domicile:
Requested Filing Mode: Review & Approval Domicile Status Comments:
Explanation for Combination/Other: Market Type: Group
Submission Type: New Submission Group Market Size: Small and Large
Group Market Type: Association Overall Rate Impact:
Filing Status Changed: 09/08/2020
State Status Changed: Deemer Date:
Created By: Jude Daye Submitted By: Jude Daye
Corresponding Filing Tracking Number:

Filing Description:
April 30, 2020

Thomas Crompton
Health Systems Finance Associate Director
Green Mountain Care Board
144 State Street
Montpelier, Vermont 05602

Subject:Blue Cross and Blue Shield of Vermont - NAIC # 53295
2021 Association Health Plan Rating Program Filing

Dear Mr. Crompton:

Attached for the Green Mountain Care Board's review and approval is Blue Cross and Blue Shield of Vermont's 2021 Association Health Plan Rating Program Filing. As directed by the Board, this filing combines the various factor filings for large group rating components (trend, large claims, benefit relativity, administrative fees and contribution to reserve, and the formula itself) into a single filing.

Please let me know if we can answer any questions or provide further information during your review.

Sincerely,

Ruth Greene

cc:Paul Schultz/BCBSVT
Martine Lemieux/BCBSVT

Company and Contact

Filing Contact Information

Jude Daye, Executive Assistant dayej@bcbsvt.com
445 Industrial Lane 802-371-3244 [Phone]
Montpelier, VT 05601

SERFF Tracking #: BCVT-132360219**State Tracking #:****Company Tracking #:**

State: VermontGMCB**Filing Company:** BCBSVT**TOI/Sub-TOI:** ML02 Multi-Line - Other/ML02.000 Multi-Line - Other**Product Name:** 2021 BCBSVT AHP Rating Program Filing**Project Name/Number:** /

Filing Company Information

BCBSVT

CoCode: 53295

State of Domicile: Vermont

PO BOX 186

Group Code:

Company Type: Hospital

Montpelier, VT 05601

Group Name:

Service Corp

(802) 371-3450 ext. [Phone]

FEIN Number: 03-0277307

State ID Number:

Filing Fees

Fee Required? No

Retaliatory? No

Fee Explanation:

SERFF Tracking #:	BCVT-132360219	State Tracking #:	Company Tracking #:
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Correspondence Summary

Dispositions

Status	Created By	Created On	Date Submitted
Approved	Thomas Crompton	09/08/2020	09/08/2020

Objection Letters and Response Letters

Objection Letters

Status	Created By	Created On	Date Submitted
Pending Response	Jacqueline Lee	06/16/2020	06/16/2020
Pending Response	Thomas Crompton	06/03/2020	06/03/2020
Pending Response	Jacqueline Lee	05/07/2020	05/07/2020

Response Letters

Responded By	Created On	Date Submitted
Matthew Goodrich	06/18/2020	06/18/2020
Matthew Goodrich	06/09/2020	06/09/2020
Matthew Goodrich	05/18/2020	05/18/2020

Filing Notes

Subject	Note Type	Created By	Created On	Date Submitted
GMCB Order - Revised Exhibits	Note To Reviewer	Matthew Goodrich	09/04/2020	09/04/2020
Response to 2021 AHP Filing 05.07.2020 Inquiry – Q6	Note To Reviewer	Matthew Goodrich	05/21/2020	05/21/2020
Updated Filing Materials	Note To Reviewer	Matthew Goodrich	05/19/2020	05/19/2020

SERFF Tracking #:	BCVT-132360219	State Tracking #:	Company Tracking #:
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Disposition

Disposition Date: 08/28/2020

Implementation Date: 01/01/2021

Status: Approved

Comment: This filing has been approved per GMCB Order dated 08/28/20.

Rate data does NOT apply to filing.

Schedule	Schedule Item	Schedule Item Status	Public Access
Supporting Document	Civil Union Rating Requirements		No
Supporting Document	Filing Compliance Certification		No
Supporting Document	Third Party Filing Authorization		No
Supporting Document	Cover Letter		No
Supporting Document	F106 Form		No
Supporting Document	Plain Language Summary		No
Supporting Document	Appendix A		No
Supporting Document	Response to 2021 AHP Rating Program Inquiry Letter 1		No
Supporting Document	Actuarial Memorandum		No
Supporting Document	Exhibits		No
Supporting Document	Response to 2021 AHP Rating Program Inquiry Letter 2		No
Supporting Document	Response to 2021 AHP Rating Program Inquiry Letter 3		No

State: VermontGMCB **Filing Company:** BCBSVT
TOI/Sub-TOI: ML02 Multi-Line - Other/ML02.000 Multi-Line - Other
Product Name: 2021 BCBSVT AHP Rating Program Filing
Project Name/Number: /

Objection Letter

Objection Letter Status	Pending Response
Objection Letter Date	06/16/2020
Submitted Date	06/16/2020
Respond By Date	06/18/2020

Dear Jude Daye,

Introduction:

Please see the attached letter.

Conclusion:

Sincerely,

Jacqueline Lee



LEWIS & ELLIS

Actuaries and Consultants

700 Central Expressway South

Suite 550

Allen, TX 75013

972-850-0850

lewisellis.com

June 16, 2020

Jude Daye, Executive Assistant
Blue Cross and Blue Shield of Vermont
445 Industrial Lane
Montpelier, VT 05601

Re: Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Filing
SERFF Tracking #: BCVT-132360219

Dear Jude Daye:

Thank you for your responses. We request the following information regarding this filing:

Questions:

1. Provide further support for the assumptions regarding hospital budget increases in October 2020.

Please be aware that we expect to have further questions regarding the filing as the review continues.

To ensure that the review of your filing has been completed before statutory deadlines, we expect you to respond as expeditiously as possible to every objection in our letter, but no later than June 18, 2020. Note that the responses can be submitted separately and do not have to be submitted all at the same time.

We trust that you understand these forms may not be used in Vermont until they are formally approved by the GMCB.

Sincerely,

Kevin Ruggeberg, ASA, MAAA
Consulting Actuary
Lewis & Ellis, Inc.
kruggeberg@lewisellis.com
(972)850-0850

State: VermontGMCB **Filing Company:** BCBSVT
TOI/Sub-TOI: ML02 Multi-Line - Other/ML02.000 Multi-Line - Other
Product Name: 2021 BCBSVT AHP Rating Program Filing
Project Name/Number: /

Objection Letter

Objection Letter Status	Pending Response
Objection Letter Date	06/03/2020
Submitted Date	06/03/2020
Respond By Date	06/08/2020

Dear Jude Daye,

Introduction:

Please see attached letter.

Conclusion:

Sincerely,
Thomas Crompton

Green Mountain Care Board
144 State Street
Montpelier, VT 05602

802-828-2177
www.gmcboard.vermont.gov

Kevin Mullin, Chair
Jessica Holmes, PhD
Robin Lunge, JD, MHCDS
Maureen Usifer
Tom Pelham
Susan Barrett, JD, Executive Director

June 3, 2020

Mr. Paul A. Schultz, F.S.A., M.A.A.A.
Chief Actuary
BlueCross BlueShield of Vermont
PO Box 186
Montpelier, VT 05601-0186

Re: Blue Cross Blue Shield of Vermont 2021 Large Group Filing (SERFF Tracking #: BCVT-131835151; GMCB Docket No. GMCB-002-20rr); The Vermont Health Plan 2021 Large Group Filing (SERFF Tracking #: BCVT-131835292; GMCB Docket No. GMCB-003-20rr); Blue Cross Blue Shield of Vermont 2021 Association Health Plan Filing (SERFF Tracking #: BCVT-132360219; GMCB Docket No. GMCB-004-20rr)

Dear Mr. Schultz,

Thank you for the May 15, 2020 response to Question 4 of the May 6th and May 7th objection letters from the Board's contract actuary regarding the impact of COVID-19 on future costs in the above filings. Pursuant to its authority under 8 V.S.A. § 4062 and 18 V.S.A. 9375(b)(6), the Board requests that Blue Cross Blue Shield of Vermont (BCBSVT) and the Vermont Health Plan (TVHP) provide the following additional information with respect to the above-referenced filings:

1. Provide data on utilization and costs by service category for the 15-month period ending April 2020 and quantify the impact of utilization dampening associated with COVID-19, the value thereof, and the impact on reserves.
2. You state that "[s]ome portion of deferred care will be foregone altogether, while other services will have only been delayed" and that "the timing of the return of delayed care will depend on the timing and severity of additional waves of infection and periods of social distancing." Provide any analyses you have developed regarding the amount and value of care that has been or will be deferred as a result of COVID-19 and the efforts being taken to prevent its spread, the portion of this deferred care that will be foregone, the portion that will be delayed, and the time period over which the deferred care that has been delayed will return.
3. You identified several potential costs associated with COVID-19, including direct costs of treatment, costs of a vaccine, and costs associated with a decline in the health status of the population and noted that "any increased cost due to the COVID-19 pandemic will be funded through policyholder reserves." Quantify the additional costs you expect to incur in connection



with COVID-19 for the plans covered by the above filings, including the number of COVID-19 cases and projected costs per case, and the expected impact on reserves.

4. Provide the number and percentage of cases of COVID-19 you have had in Vermont to date and the costs of these cases.
5. Provide the increase or decrease in the membership (number and percentage) in the BCBSVT and TVHP Large Group plans covered by the above filings during the current rating period.

When providing the responses, please copy the question in the same numbered format as in this document, and provide your response immediately following. To ensure that the review of your filing has been completed before statutory deadlines, we expect you to respond as expeditiously as possible, but no later than the end of the day on Monday, June 8, 2020. Note that the responses can be submitted separately and do not have to be submitted all at the same time. Thank you in advance for your cooperation.

Sincerely,

Michael Barber
General Counsel
Green Mountain Care Board

cc: Kaili Kuiper, Esq., HCA
Eric Schultheis, Esq., HCA
Amerin Aborjaily, Esq., GMCB
Thomas Crompton, GMCB
Christina McLaughlin, GMCB



State: VermontGMCB **Filing Company:** BCBSVT
TOI/Sub-TOI: ML02 Multi-Line - Other/ML02.000 Multi-Line - Other
Product Name: 2021 BCBSVT AHP Rating Program Filing
Project Name/Number: /

Objection Letter

Objection Letter Status	Pending Response
Objection Letter Date	05/07/2020
Submitted Date	05/07/2020
Respond By Date	05/18/2020

Dear Jude Daye,

Introduction:

Please see the attached letter.

Conclusion:

Sincerely,

Jacqueline Lee



May 7, 2020

Jude Daye, Executive Assistant
Blue Cross and Blue Shield of Vermont
445 Industrial Lane
Montpelier, VT 05601

Re: Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Filing
SERFF Tracking #: BCVT-132360219

Dear Jude Daye:

We have been retained by the Green Mountain Care Board ("GMCB") to review the above referenced group products filing submitted on 4/30/2020. The following additional information is required for this filing.

Notice regarding proper responses:

- A minimum-acceptable response to quantitative questions from us must include a spreadsheet calculation with retained formulas such that we can replicate the calculations therein.
- Explanatory responses are merely a supplement to the spreadsheet material and in of themselves will constitute a lack of response.

Questions:

1. Has the form filing been approved by DFR?
2. How much enrollment is anticipated for 2021 on the AHP product?
3. How do the utilization trends in Vermont compare to the Blue Trend Survey or other nationwide utilization trends?
4. Provide the quantitative support for the unit cost trends on pages 6 and 7 of the Actuarial Memorandum.
5. The table Calculation of the Manual Rate (Actives) in the actuarial memorandum (pg 20) appears to contain errors. For example, the intended value for C is unclear and neither E nor G follows the formula shown. Please provide a corrected version.
6. Please provide all exhibits in excel format.
7. It appears that no adjustments were made to the experience for potential impacts of COVID-19 on future costs. Please describe the Company's rationale for not incorporating an impact.

8. Please confirm that the "Facility" and "Professional" claims used to develop utilization and unit cost trends exclude claims relating to pharmaceuticals covered by the medical benefit.

Please be aware that we expect to have further questions regarding the filing as the review continues.

To ensure that the review of your filing has been completed before statutory deadlines, we expect you to respond as expeditiously as possible to every objection in our letter, but no later than May 18, 2020. Note that the responses can be submitted separately and do not have to be submitted all at the same time.

We trust that you understand these forms may not be used in Vermont until they are formally approved by the GMCB.

Sincerely,

Kevin Ruggeberg, ASA, MAAA
Consulting Actuary
Lewis & Ellis, Inc.
kruggeberg@lewisellis.com
(972)850-0850

SERFF Tracking #:	BCVT-132360219	State Tracking #:	Company Tracking #:
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Response Letter

Response Letter Status	Submitted to State
Response Letter Date	06/18/2020
Submitted Date	06/18/2020

Dear Thomas Crompton,

Introduction:

Response 1

Comments:

Please find attached our responses to the 2021 BCBSVT AHP Rating Program Filing Inquiries dated June 16, 2020

Changed Items:

Supporting Document Schedule Item Changes	
Satisfied - Item:	Response to 2021 AHP Rating Program Inquiry Letter 3
Comments:	
Attachment(s):	Response to 2021 AHP Rating Program Inquiry Letter 3.pdf

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Conclusion:

Sincerely,

Matthew Goodrich

SERFF Tracking #:	BCVT-132360219	State Tracking #:	Company Tracking #:
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Response Letter

Response Letter Status	Submitted to State
Response Letter Date	06/09/2020
Submitted Date	06/09/2020

Dear Thomas Crompton,

Introduction:

Response 1

Comments:

Please find attached our responses to the 2021 BCBSVT AHP Rating Program Filing Inquiries dated June 3, 2020

Changed Items:

Supporting Document Schedule Item Changes	
Satisfied - Item:	Response to 2021 AHP Rating Program Inquiry Letter 2
Comments:	
Attachment(s):	Response to 2021 AHP Rating Program Inquiry Letter 2.pdf

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Conclusion:

Sincerely,

Matthew Goodrich

SERFF Tracking #:	BCVT-132360219	State Tracking #:	Company Tracking #:
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Response Letter

Response Letter Status	Submitted to State
Response Letter Date	05/18/2020
Submitted Date	05/18/2020

Dear Thomas Crompton,

Introduction:

Response 1

Comments:

Please find attached our responses to the 2021 BCBSVT AHP Rating Program Filing Inquiries dated May 7, 2020

Changed Items:

Supporting Document Schedule Item Changes	
Satisfied - Item:	Response to 2021 AHP Rating Program Inquiry Letter 1
Comments:	
Attachment(s):	Response to 2021 AHP Rating Program Inquiry Letter 1.pdf Response to 2021 AHP Filing 05.07.2020 Inquiry – Q6 (SERFF).xlsx

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Conclusion:

Sincerely,

Matthew Goodrich

State:	Vermont	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Note To Reviewer

Created By:

Matthew Goodrich on 09/04/2020 07:59 AM

Last Edited By:

Matthew Goodrich

Submitted On:

09/04/2020 08:00 AM

Subject:

GMCB Order - Revised Exhibits

Comments:

Please find attached exhibits reflecting the GMCB order dated August 28, 2020.

September 4, 2020

Thomas Crompton
Health Systems Finance Associate Director
Green Mountain Care Board
144 State Street
Montpelier, Vermont 05602

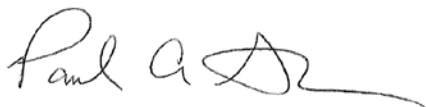
**Subject: Blue Cross and Blue Shield of Vermont - NAIC # 53295
2021 Association Health Plan Rating Program Filing**

Dear Mr. Crompton:

Pursuant to the Green Mountain Care Board's Decision and Order dated August 28, 2020, we are writing to confirm that BCBSVT will incorporate the ordered modifications to the association health plan rating program filing. BCBSVT have filed amended exhibits, which incorporate the ordered allowed medical trend and administrative charges. A supplemental exhibit is provided which calculates the impact of the ordered trends on the manual rate.

Should you have any questions, please do not hesitate to contact us.

Sincerely,



Paul A Schultz, F.S.A., M.A.A.A.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 AHP RATING PROGRAM FILING

Manual Rate Calculation

Calculation of the Manual Rate (Actives)		
Completed Experience Paid Claims, capped at \$400,000 and completed	A	\$112,217,993
Expected Claims between \$400,000 and \$1,000,000	B	\$2,622,153
Overall Paid Trend factor (8.6% for 24 months)	C	1.180
Projected Total Paid Claims	$D = (A + B) \times C$	\$135,478,209
Total Member Months	E	213,895
Manual Rate	$F = D / E$	\$633.39

Impact of Ordered Trend Modifications		
Filed 2021 Manual Rate	\$632.81	
Approved 2021 Manual Rate	\$633.39	
Impact of Ordered Trend Modifications	\$0.57	0.1%

Calculation of the Manual Rate (Medicare Primary)		
BRV Experience Paid Claims	A	\$34,070,146
Overall Paid Trend factor (6.9% for 30 months)	B_1	1.187
Pharmacy Contract Adjustment	B_2	0.994
Projected Total Paid Claims	$C = A \times B_1 \times B_2$	\$40,186,467
Total Member Months	D	94,703
Manual Rate	$E = C / D$	\$424.34

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3A

Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	Active
1	VFP	\$200	20%	\$800	\$20	\$20			\$400	30%	\$1,600	1.0343
2	VFP	\$300	10%	\$1,300	\$10	\$30	\$100	\$50	\$600	30%	\$2,600	1.0169
3	VFP	\$500	20%	\$1,500	\$20	\$20			\$1,000	30%	\$3,000	0.9737
4	VFP	\$500	20%	\$1,500	\$20	\$40	\$250	\$250	\$1,000	30%	\$3,000	0.9730
5	VFP	\$500	20%	\$1,750	\$20	\$20			\$1,000	30%	\$3,500	0.9631
6	VFP	\$1,000	20%	\$2,300	\$20	\$20	\$100		\$2,000	30%	\$4,600	0.9312
7	VFP	\$1,000	0%	\$2,350	\$25	\$25	\$50	\$50	\$2,000	30%	\$3,500	0.9759
8	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	0.8701
9	VFP	\$1,000	0%	\$2,000	\$30	\$50	\$150		\$2,000	30%	\$4,000	0.9520
10	VFP	\$1,500	20%	\$3,000	\$25	\$45	\$250	\$250	\$3,000	30%	\$6,000	0.8806
11	VFP	\$2,000	30%	\$3,500	\$20	\$20	\$500		\$3,000	50%	\$6,000	0.8534
12	VFP	\$2,000	20%	\$4,000	\$40	\$40	\$150		\$4,000	30%	\$8,000	0.8373
13	VFP	\$2,500	20%	\$5,000	\$20	\$20			\$5,000	30%	\$10,000	0.8067
14	VFP	\$2,500	20%	\$5,150	\$20	\$40			\$5,000	30%	\$10,300	0.7844
15	VFP	\$2,500	20%	\$6,000	\$20	\$30			\$5,000	30%	\$12,000	0.7769
16	VFP	\$3,000	0%	\$3,000	\$30	\$40	\$200		\$6,000	30%	\$6,000	0.8669
17	VFP	\$3,000	0%	\$4,000	\$30	\$50	\$150		\$6,000	30%	\$8,000	0.8417
18	VFP	\$4,000	0%	\$5,000	\$30	\$50	\$150		\$8,000	30%	\$10,000	0.8043
19	VFP	\$4,000	20%	\$6,000	\$40	\$40	\$150		\$8,000	30%	\$12,000	0.7628
20	VFP	\$5,000	0%	\$5,000	\$25	\$25			\$10,000	30%	\$10,000	0.7596
21	COMP	\$2,000	10%	\$3,000								0.8307
22	COMP	\$3,000	0%	\$3,000								0.8018
23	COMP	\$5,000	0%	\$5,000								0.7085
24	COMP	\$6,550	0%	\$6,550								0.6580
25	COMP	\$6,850	0%	\$6,850								0.6496
26	COMP	\$7,350	0%	\$7,350								0.6364

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3B

Vermont Health Partnership (VHP) Medical Plans

index	Product	VHP In-Network Benefits							VHP Out-of-Network Benefits			Relativity Factor
		IP	OP	PCP	SCP	ER	AMB	OOPM	Deductible	Coinsurance	Out-of-Pocket	Active
1	VHP ¹	\$0	\$0	\$10	\$20	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0497
2	VHP ¹	\$250	\$100	\$15	\$25	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0354
3	VHP ¹	\$250	\$125	\$20	\$40	\$150	\$0	\$8,150	\$500	30%	\$14,700	1.0097
4	VHP ¹	\$250	\$250	\$20	\$20	\$200	\$100	\$8,150	\$1,000	30%	\$14,700	1.0244
5	VHP ¹	\$500	\$250	\$20	\$30	\$100	\$0	\$8,150	\$500	30%	\$14,700	1.0175
6	VHP ¹	\$750	\$750	\$20	\$30	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0055

PCP	Primary Care Physician Copay
SCP	Specialist Physician Copay
IP	Inpatient Care Deductible (max of 3/yr per family)
OP	Outpatient Surgery Copay
ER	Emergency Room Copay
AMB	Ambulance Copay
OOPM	Per ACA, all copays accumulate toward the Out of Pocket Maximum

1. All VHP Plans have a DME rider benefit of: \$100 deductible, 20% coinsurance, built into the relativity.
2. ER Copay: the displayed member copay goes toward the facility allowed charges.
Associated physician and ancillary charges are covered at 100%.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3C
Page 1

BCBSVT Indemnity Consumer Driven Health Plans (CDHPs)

index	Product	In-Network							Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Active
1	CDHP	\$1,500	0%	\$1,500	\$1,400	N/A	N/A	SAAO	1.1257
2	CDHP	\$1,500	20%	\$2,500	\$1,400	N/A	N/A	SAAO	1.0602
3	CDHP	\$2,000	0%	\$2,000	\$1,400	N/A	N/A	SAAO	1.0755
4	CDHP	\$2,000	20%	\$4,000	\$1,400	N/A	N/A	SAAO	0.9901
5	CDHP	\$2,500	0%	\$2,500	\$1,400	0%	N/A	SAAO	1.0427
6	CDHP	\$2,500	0%	\$2,500	\$1,400	N/A	N/A	SAAO	1.0341
7	CDHP	\$2,500	0%	\$3,500	\$1,400	0%	\$10/\$30/\$50	SAAO	1.0364
8	CDHP	\$2,500	10%	\$3,500	\$1,400	0%	N/A	SAAO	1.0045
9	CDHP	\$2,500	20%	\$3,500	\$1,400	N/A	N/A	SAAO	0.9847
10	CDHP	\$2,500	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9586
11	CDHP	\$2,600	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9547
12	CDHP	\$2,700	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9510
13	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	\$10/\$35/\$50	SAAO	0.9988
14	CDHP	\$3,000	0%	\$3,000	\$1,400	0%	N/A	SAAO	1.0084
15	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	N/A	SAAO	0.9988
16	CDHP	\$3,000	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9411
17	CDHP	\$3,500	0%	\$3,500	\$1,400	0%	N/A	SAAO	0.9786
18	CDHP	\$4,000	0%	\$4,000	\$1,400	0%	N/A	SAAO	0.9524
19	CDHP	\$4,000	20%	\$6,650	\$1,400	0%	N/A	SAAO	0.8859
20	CDHP	\$5,000	0%	\$5,000	\$1,400	0%	N/A	SAAO	0.9081
21	CDHP	\$5,000	0%	\$5,000	\$1,400	N/A	N/A	SAAO	0.8964
22	CDHP	\$6,000	0%	\$6,000	\$1,400	0%	N/A	SAAO	0.8718
23	CDHP	\$6,350	0%	\$6,350	\$1,400	0%	N/A	SAAO	0.8605
24	CDHP	\$6,450	0%	\$6,450	\$1,400	N/A	N/A	SAAO	0.8450
25	CDHP	\$6,550	0%	\$6,550	\$1,400	0%	N/A	SAAO	0.8544
26	CDHP	\$6,550	0%	\$6,550	\$1,400	N/A	N/A	SAAO	0.8419
27	CDHP	\$6,650	0%	\$6,650	\$1,400	0%	N/A	SAAO	0.8514
28	CDHP	\$6,650	0%	\$6,650	\$1,400	N/A	N/A	SAAO	0.8389
29	CDHP	\$6,850	0%	\$6,850	\$1,400	0%	N/A	SAAO	0.8456
30	CDHP	\$7,350	0%	\$7,350	\$1,400	0%	N/A	SAAO	0.8315

1. Wellness Rx: if applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for Wellness Rx accumulates toward the Out-of-Pocket Maximum.
2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the Drugs After Deductible cost share until the Out-of-Pocket Maximum is met.
3. The Rx OOPM Limit is as described in Vermont Act 171.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3D

Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Relativity
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			Active
1	CM1	\$100	\$5	40%	60%	\$10	40%	60%	\$1,400	SAAO	0.1805
2	CM2	\$0	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	0.2189
3	CM2	\$100	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	0.2096
4	COI	\$1	30%	30%	40%	30%	30%	40%	\$1,400	SAAO	0.1851
5	COI	\$1	50%	50%	50%	50%	50%	50%	\$1,400	SAAO	0.1735
6	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	0.2870
7	COP	\$0	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	0.2298
8	COP	\$0	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	0.2224
9	COP	\$0	\$10	\$30	\$60	\$20	\$60	\$120	\$1,400	SAAO	0.2221
10	COP	\$0	\$10	\$35	\$60	\$20	\$70	\$120	\$1,400	SAAO	0.2168
11	COP	\$0	\$15	\$25	\$40	\$30	\$50	\$80	\$1,400	SAAO	0.2814
12	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.2247
13	COP	\$0	\$15	\$35	\$50	\$30	\$70	\$100	\$1,400	SAAO	0.2172
14	COP	\$0	\$20	\$40	\$60	\$40	\$80	\$120	\$1,400	SAAO	0.2131
15	COP	\$0	\$20	\$40	\$80	\$40	\$80	\$160	\$1,400	SAAO	0.2125
16	COP	\$0	\$25	\$50	\$75	\$50	\$100	\$150	\$1,400	SAAO	0.2047
17	COP	\$0	\$5	\$15	\$30	\$10	\$30	\$60	\$1,400	SAAO	0.2962
18	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	0.2251
19	COP	\$50	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	0.2257
20	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	0.2928
21	COP	\$100	\$10	\$15	\$30	\$20	\$30	\$60	\$1,400	SAAO	0.2808
22	COP	\$100	\$10	\$25	\$45	\$20	\$50	\$90	\$1,400	SAAO	0.2221
23	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	0.2149
24	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	100%	0.2185
25	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	0.2147
26	COP	\$100	\$10	\$40	\$60	\$20	\$80	\$120	\$1,400	SAAO	0.2083
27	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.2180
28	COP	\$100	\$15	\$40	\$60	\$30	\$80	\$120	\$1,400	SAAO	0.2052
29	COP	\$100	\$5	\$20	\$40	\$10	\$40	\$80	\$1,400	SAAO	0.2284
30	COP	\$150	\$20	\$80	\$100	\$40	\$160	\$200	\$1,400	SAAO	0.1955

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COI/COI); CM2 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3E

Medicare Secondary Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	Medicare Secondary
1	JPLAN	\$100	20%	\$500	\$10	\$10						0.3738
2	JPLAN	\$100	20%	\$500	\$20	\$20						0.3627
3	VFP	\$0	0%	\$0	\$20	\$20	\$50		\$250	20%	\$1,000	0.3947
4	VFP	\$100	20%	\$500	\$10	\$10			\$200	30%	\$1,000	0.3389
5	VFP	\$1,000	0%	\$2,350	\$25	\$25	\$50	\$50	\$2,000	30%	\$3,500	0.2580
6	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	0.2220
7	VFP	\$500	20%	\$1,600	\$10	\$10			\$1,000	30%	\$3,000	0.2785

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.
2. The J Plan deductible applies only to infusion therapy, DME and prosthetics ambulance.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3F

Medicare Secondary Consumer Driven Health Plans (CDHPs)

index	Product	In-Network							Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Medicare Secondary
1	CDHP	\$2,500	0%	\$2,500	\$1,400	0%	N/A	SAAO	0.8577
2	CDHP	\$3,500	0%	\$3,500	\$1,400	0%	N/A	SAAO	0.8145
3	CDHP	\$5,000	0%	\$5,000	\$1,400	N/A	\$5/\$20/\$40	SAAO	0.6950

1. Wellness Rx: if applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for **Wellness Rx** accumulates toward the Out-of-Pocket Maximum.
2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the **Drugs After Deductible** cost share until the Out-of-Pocket Maximum is met.
3. The Rx OOPM Limit is as described in Vermont Act 171.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3G

Medicare Secondary Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Relativity
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			Medicare Secondary
1	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	0.9589
2	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.7144
3	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	0.7404
4	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	1.0059
5	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	0.6979
6	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.6995

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			Leverage Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	
1	VFP	\$200	20%	\$800	\$20	\$20			\$400	30%	\$1,600	1.0026
2	VFP	\$300	10%	\$1,300	\$10	\$30	\$100	\$50	\$600	30%	\$2,600	1.0030
3	VFP	\$500	20%	\$1,500	\$20	\$20			\$1,000	30%	\$3,000	1.0039
4	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	1.0062
5	VFP	\$1,000	0%	\$2,000	\$30	\$50	\$150		\$2,000	30%	\$4,000	1.0043
6	VFP	\$1,500	20%	\$3,000	\$25	\$45	\$250	\$250	\$3,000	30%	\$6,000	1.0060
7	VFP	\$2,000	30%	\$3,500	\$20	\$20	\$500		\$3,000	50%	\$6,000	1.0066
8	VFP	\$3,000	0%	\$4,000	\$30	\$50	\$150		\$6,000	30%	\$8,000	1.0069
9	VFP	\$4,000	0%	\$5,000	\$30	\$50	\$150		\$8,000	30%	\$10,000	1.0079
10	VFP	\$5,000	0%	\$5,000	\$25	\$25			\$10,000	30%	\$10,000	1.0091
11	COMP	\$2,000	10%	\$3,000								1.0074
13	COMP	\$5,000	0%	\$5,000								1.0107

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are the covered at 100%.

Vermont Health Partnership (VHP) Medical Plans

index	Product	VHP In-Network Benefits							VHP Out-of-Network Benefits			Leverage Factor
		Inpatient Care Deductible ²	Outpatient Surgery Copay	Office Copay	Specialist Copay	ER ³ Copay	AMB Copay	Out-of-Pocket	Deductible	Coinsurance	Out-of-Pocket	
1	VHP ¹	\$0	\$0	\$10	\$20	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0013
2	VHP ¹	\$250	\$100	\$15	\$25	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0016
3	VHP ¹	\$250	\$250	\$20	\$20	\$200	\$100	\$8,150	\$1,000	30%	\$14,700	1.0018
4	VHP ¹	\$750	\$750	\$20	\$30	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0022

1. All VHP Plans have a DME rider benefit of: \$100 deductible, 20% coinsurance, built into the relativity.
2. Maximum of 3/yr per family
3. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.

BCBSVT Comprehensive Consumer Driven Health Plans (CDHPs)

index	Product	In-Network							Leverage Factor	
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Medical	Rx
1	CDHP	\$1,500	0%	\$1,500	\$1,400	N/A	N/A	SAAO	1.0049	1.0068
2	CDHP	\$2,500	20%	\$5,000	\$1,400	0%	N/A	SAAO	1.0091	1.0057
3	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	N/A	SAAO	1.0077	1.0086
4	CDHP	\$5,000	0%	\$5,000	\$1,400	0%	N/A	SAAO	1.0105	1.0059
5	CDHP	\$6,000	0%	\$6,000	\$1,400	0%	N/A	SAAO	1.0116	1.0061
6	CDHP	\$6,850	0%	\$6,850	\$1,400	0%	N/A	SAAO	1.0124	1.0062

1. Wellness Rx: if applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for Wellness Rx accumulates toward the Out-of-Pocket Maximum.
2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the Drugs After Deductible cost share until the Out-of-Pocket Maximum is met.
3. The Rx OOPM Limit is as described in Vermont Act 171.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT LEVERAGE FACTORS

EXHIBIT 3I

Prescription Drug Cards

Copay (\$) / Coinsurance (%)											
Index	Type	Deductible	Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand	OOPM	Diabetic Supplies	Leverage Factor
1	CM1	\$100	\$5	40%	60%	\$10	40%	60%	\$1,400	SAAO	1.0082
2	CM2	\$0	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	1.0055
3	CM2	\$100	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	1.0068
4	COI	\$1	30%	30%	40%	30%	30%	40%	\$1,400	SAAO	1.0074
5	COI	\$1	50%	50%	50%	50%	50%	50%	\$1,400	SAAO	1.0094
6	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	1.0045
7	COP	\$0	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	1.0053
8	COP	\$0	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	1.0055
9	COP	\$0	\$10	\$30	\$60	\$20	\$60	\$120	\$1,400	SAAO	1.0056
10	COP	\$0	\$10	\$35	\$60	\$20	\$70	\$120	\$1,400	SAAO	1.0058
11	COP	\$0	\$15	\$25	\$40	\$30	\$50	\$80	\$1,400	SAAO	1.0052
12	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	1.0060
13	COP	\$0	\$15	\$35	\$50	\$30	\$70	\$100	\$1,400	SAAO	1.0063
14	COP	\$0	\$20	\$40	\$60	\$40	\$80	\$120	\$1,400	SAAO	1.0069
15	COP	\$0	\$20	\$40	\$80	\$40	\$80	\$160	\$1,400	SAAO	1.0070
16	COP	\$0	\$25	\$50	\$75	\$50	\$100	\$150	\$1,400	SAAO	1.0076
17	COP	\$0	\$5	\$15	\$30	\$10	\$30	\$60	\$1,400	SAAO	1.0035
18	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	1.0046
19	COP	\$50	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	1.0059
20	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	1.0039
21	COP	\$100	\$10	\$15	\$30	\$20	\$30	\$60	\$1,400	SAAO	1.0052
22	COP	\$100	\$10	\$25	\$45	\$20	\$50	\$90	\$1,400	SAAO	1.0064
23	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	1.0066
24	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	100%	1.0061
25	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	1.0067
26	COP	\$100	\$10	\$40	\$60	\$20	\$80	\$120	\$1,400	SAAO	1.0070
27	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	1.0070
28	COP	\$100	\$15	\$40	\$60	\$30	\$80	\$120	\$1,400	SAAO	1.0075
29	COP	\$100	\$5	\$20	\$40	\$10	\$40	\$80	\$1,400	SAAO	1.0055
30	COP	\$150	\$20	\$80	\$100	\$40	\$160	\$200	\$1,400	SAAO	1.0090

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COI/COI); CM2 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
ADMINISTRATIVE CHARGES DEVELOPMENT

EXHIBIT 5B

Administrative Charges PUPM

Unit		Account	Member	Contract	Invoice Counts	Medical Claim	Projected Claims	Large Group Subtotal	CP Medsup
Administrative Expenses	A	\$899,178	\$2,428,467	\$390,804	\$4,804	\$670,763	\$2,821,865	\$7,215,880	
Unit Months	B	721	153,676	81,861	1,108	144,172	77,209,066		
Expense PUPM	$C = A / B$	\$1,247.13	\$15.80	\$4.77	\$4.34	\$4.65			\$38.94
Increase for Membership	D	3.0%	3.0%	3.0%	3.0%	3.0%			3.0%
Updated Expense PUPM	$E = (1+D) \times C$	\$1,284.29	\$16.27	\$4.92	\$4.47	\$4.79	3.7%		\$40.10
Annual Trend	F	2.2%	2.2%	2.2%	2.2%	2.2%			2.2%
Monthly Trend Factor	$G = (1+F)^{(1/12)}$	1.0018	1.0018	1.0018	1.0018	1.0018			1.0018
Months of Trend to January 2020	H	13	13	13	13	13			13
Projection Periods									
Effective Date		Account	Member	Contract	Invoice Counts	Medical Claim	Projected Claims		
Jan-21	$I = E \times G^H$	\$1,315.16	\$16.67	\$5.03	\$4.57	\$4.91	3.7%		\$41.06

State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Note To Reviewer

Created By:

Matthew Goodrich on 05/21/2020 02:46 PM

Last Edited By:

Matthew Goodrich

Submitted On:

05/21/2020 02:46 PM

Subject:

Response to 2021 AHP Filing 05.07.2020 Inquiry – Q6

Comments:

Please find attached the PDF version of the response to Objection 6.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

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Exhibit 5 Administrative Charges

- 5A Reconciliation of Experience Base Administrative Expense to Restated GAAP Expenses
- 5B Administrative Charges PUPM

Exhibit 6 Other Factors

- 6A Credibility Table
- 6B Pooling Point By Membership

Example Calculation of Projected Single Claims Rate for Active Members

Benefit-Adjusted Projected Single Claims Rate:

Experience Period Paid Claims	\$2,142,000	A
Experience Period Claims Amount above \$70,000 Pooling Limit	\$242,000	B
Capped Claims	\$1,900,000	$C = A - B$
Completion Factor	1.005	D
Completed Capped Claims	\$1,910,000	$E = C \times D$
Expected Claims above \$70,000 Pooling Limit	\$228,000	F
Experience Adjustment Factor	1.000	G
Adjusted Experience Period Claims	\$2,138,000	$H = (E + F) \times G$
Experience Period Member Months	4,000	I
Adjusted Experience Period Claims PMPM	\$534.50	$J = H \div I$
Average Experience Period Seasonally Adjusted Benefit Relativity Factor	0.775	K
Demographic Normalization	1.000	L
Benefit-Adjusted Experience Period Single Claims Rate	\$689.24	$M = J \div K \times L$
Trend	1.084	N
Trend Months	18	O
Trend Factor	1.129	$P = N ^ { (O/12)}$
Pharmacy Contract Adjustment	0.990	Q
Projected Single Contract Rate	\$770.10	$R = M \times P \times Q$
Adjusted Manual Rate	\$722.55	S
Credibility factor	53%	T
Benefit-Adjusted Projected Single Claims Rate	\$747.96	$U = (R \times T) + \{ S \times (1 - T)\}$

Credibility Calculation

Active Member Months	4,000	a
Member Months for Full Credibility at \$70,000 Pooling Limit	14,002	b
Credibility	53%	$c = (a / b) ^ {0.5}$

Example Calculation of Projected Single Claims Rate for Medicare Primary Members

Benefit-Adjusted Projected Single Claims Rate:

Experience Period Paid Claims	\$16,000	A
Experience Period Claims Amount above \$70,000 Pooling Limit	\$0	B
Capped Claims	\$16,000	$C = A - B$
Completion Factor	1.011	D
Completed Capped Claims	\$16,200	$E = C \times D$
Expected Claims above \$70,000 Pooling Limit	\$0	F
Experience Adjustment Factor	1.000	G
Adjusted Experience Period Claims	\$16,200	$H = (E + F) \times G$
Experience Period Member Months	96	I
Adjusted Experience Period Claims PMPM	\$168.75	$J = H \div I$
Average Experience Period Seasonal Adjusted Benefit Relativity Factor	0.446	K
Demographic Normalization	1.000	L
Benefit-Adjusted Experience Period Single Claims Rate	\$378.45	$M = J \div K \times L$
Trend	\$1.07	N
Trend Months	\$18.00	O
Trend Factor	1.113	$P = N ^ { (O/12)}$
Pharmacy Contract Adjustment	0.990	Q
Projected Single Contract Rate	\$417.01	$R = M \times P \times Q$
Adjusted Manual Rate	\$0.00	S
Credibility factor	11%	T
Benefit-Adjusted Projected Single Claims Rate	\$44.78	$U = (R \times T) + \{ S \times (1 - T)\}$

Credibility Calculation

Medicare Primary Member Months	96	a
Member Months for Full Credibility	8,325	b
Credibility	11%	$c = (a / b) ^ {0.5}$

Example Calculation of Projected Single Claims Rate for Active Members with Multiple Experience Periods

Benefit-Adjusted Projected Single Claims Rate:

Period	A	B	C	Manual	
Experience Period Start	7/1/2019	7/1/2018	7/1/2018		
Experience Period End	6/30/2020	6/30/2019	6/30/2019		
Paid Claims in Experience Period	\$2,142,000	\$2,000,000	\$1,820,000		A
Claims over \$110,000 Pooling Limit	\$242,000	\$321,000	\$80,000		B
Capped Claims	\$1,900,000	\$1,679,000	\$1,740,000		C = A — B
Completion Factor	1.005	1.000	1.000		D
Completed Capped Claims	\$1,910,000	\$1,680,000	\$1,740,000		E = C x D
Expected Claims above \$70,000 Pooling Limit	\$228,000	\$212,000	\$200,000		F
Experience Adjustment Factor	1.000	1.000	1.000		G
Adjusted Experience Period Claims	\$2,138,000	\$1,892,000	\$1,940,000		H = (E + F) x G
Experience Period Member Months	4,000	4,100	3,900		I
Adjusted Experience Period Claims PMPM	\$534.50	\$461.46	\$497.44		J = H ÷ I
Average Experience Period Seasonally Adjusted Benefit Relativity Factor	0.775	0.775	0.775		K
Demographic Normalization	1.000	1.002	0.998		L
Benefit-Adjusted Experience Period Single Claims Rate	\$689.24	\$596.25	\$640.16		M = J ÷ K x L
Trend	1.072	1.072	1.072		N
Trend Months	18	30	42		O
Trend Factor	1.110	1.190	1.276		P = N ^ (O/12)
Pharmacy Contract Adjustment	0.990	0.980	0.975		Q
Projected Single Contract Rate	\$757.35	\$695.25	\$796.11	\$722.55	R = M x P x Q
Credibility Calculation					
Starting Residual	100.0%	46.6%	21.4%	10.1%	S = 1 - Σ W
Active Member Months	4,000	4,100	3,900		T
Member Months for Full Credibility at \$70,000 Pooling Limit	14,002	14,002	14,002		U
Credibility	53.4%	54.1%	52.8%		V = (T / U) ^ 0.5
Rating Credibility	53.4%	25.2%	11.3%	10.1%	W = S x V
Projected Single Contract Rate	\$757.35	\$695.25	\$796.11	\$722.55	X
Credibility	53.4%	25.2%	11.3%	10.1%	Y
Benefit-Adjusted Projected Single Claims Rate	\$404.79	\$175.13	\$89.75	\$72.89	Z = W x Y
Σ Benefit-Adjusted Projected Single Claims Rate	\$742.57				= Σ Z

Example Calculation of Required Premium by Product and Tier
Illustrative Only

From Exhibit 1A : Active Benefit-Adjusted Projected Single Claims Rate (S) \$747.96
Medicare Primary Benefit-Adjusted Projected Single Claims Rate (S) \$44.78

Plan A		Single	2-Person	Family	Medicare Primary
Members per contract		1.000	2.000	3.940	1.000
BRV:	A	0.929	1.859	2.622	0.439
Projected Claims:	B1 = A x S	\$695.08	\$1,390.17	\$1,961.36	\$19.64
Net Cost of Reinsurance:	B2	\$1.71	\$3.42	\$6.74	\$0.00
Projected Rx Rebate:	B3	-\$14.00	-\$28.00	-\$55.16	-\$14.00
State Mandates and Assessments					
Vaccines for Vermonters	C1	\$2.50	\$5.00	\$9.85	\$2.50
Blueprint for Health	C2	\$6.01	\$12.02	\$23.68	\$6.01
Health Care Claims Tax	C3 = 0.999% * B1	\$6.94	\$13.89	\$19.59	\$0.20
GMCB Billback	C4	\$1.87	\$3.74	\$7.37	\$1.87
Administrative Charge	D	\$50.00	\$100.00	\$197.00	\$50.00
Commission (% premium)	E	3.00%			
Contribution to Reserve	F	1.50%			
Federal Insurer Fee	G	2.20%			
Required Premium:	$H = [\Sigma(B_i) + \Sigma(C_i) + D] / (1 - E - F - G)$	\$803.98	\$1,607.97	\$2,326.29	\$70.97

Plan B		Single	2-Person	Family	Medicare Secondary
Members per contract		1.000	2.000	3.938	1.000
BRV:	A	1.023	2.046	2.887	0.453
Projected Claims:	B1 = A x S	\$765.17	\$1,530.33	\$2,159.12	\$20.29
Net Cost of Reinsurance:	B2	\$1.71	\$3.42	\$6.74	\$0.00
Projected Rx Rebate:	B3	-\$14.00	-\$28.00	-\$55.16	-\$14.00
State Mandates and Assessments					
Vaccines for Vermonters	C1	\$2.50	\$5.00	\$9.85	\$2.50
Blueprint for Health	C2	\$6.01	\$12.02	\$23.68	\$6.01
Health Care Claims Tax	C3 = 0.999% * B1	\$7.64	\$15.29	\$21.57	\$0.20
GMCB Billback	C4	\$1.87	\$3.74	\$7.37	\$1.87
Administrative Charge	D	\$50.00	\$100.00	\$197.00	\$50.00
Commission (% premium)	E	3.00%			
Contribution to Reserve	F	1.50%			
Federal Insurer Fee	G	2.20%			
Required Premium:	$H = [\Sigma(B_i) + \Sigma(C_i) + D] / (1 - E - F - G)$	\$879.85	\$1,759.70	\$2,540.37	\$71.68

ILLUSTRATION OF CONTRACT NORMALIZATION

Month	Contract Increase	Normalization Factor	Experience Claims	Normalized Claims
Nov-15		1.1699	\$1,000,000	\$1,169,859
Dec-15		1.1699	\$1,000,000	\$1,169,859
Jan-16		1.1699	\$1,000,000	\$1,169,859
Feb-16		1.1699	\$1,000,000	\$1,169,859
Mar-16		1.1699	\$1,000,000	\$1,169,859
Apr-16		1.1699	\$1,000,000	\$1,169,859
May-16		1.1699	\$1,000,000	\$1,169,859
Jun-16		1.1699	\$1,000,000	\$1,169,859
Jul-16		1.1699	\$1,000,000	\$1,169,859
Aug-16		1.1699	\$1,000,000	\$1,169,859
Sep-16		1.1699	\$1,000,000	\$1,169,859
Oct-16	1.0400	1.1249	\$1,000,000	\$1,124,864
Nov-16		1.1249	\$1,000,000	\$1,124,864
Dec-16		1.1249	\$1,000,000	\$1,124,864
Jan-17		1.1249	\$1,000,000	\$1,124,864
Feb-17		1.1249	\$1,000,000	\$1,124,864
Mar-17		1.1249	\$1,000,000	\$1,124,864
Apr-17		1.1249	\$1,000,000	\$1,124,864
May-17		1.1249	\$1,000,000	\$1,124,864
Jun-17		1.1249	\$1,000,000	\$1,124,864
Jul-17		1.1249	\$1,000,000	\$1,124,864
Aug-17		1.1249	\$1,000,000	\$1,124,864
Sep-17		1.1249	\$1,000,000	\$1,124,864
Oct-17	1.0400	1.0816	\$1,000,000	\$1,081,600
Nov-17		1.0816	\$1,000,000	\$1,081,600
Dec-17		1.0816	\$1,000,000	\$1,081,600
Jan-18		1.0816	\$1,000,000	\$1,081,600
Feb-18		1.0816	\$1,000,000	\$1,081,600
Mar-18		1.0816	\$1,000,000	\$1,081,600
Apr-18		1.0816	\$1,000,000	\$1,081,600
May-18		1.0816	\$1,000,000	\$1,081,600
Jun-18		1.0816	\$1,000,000	\$1,081,600
Jul-18		1.0816	\$1,000,000	\$1,081,600
Aug-18		1.0816	\$1,000,000	\$1,081,600
Sep-18		1.0816	\$1,000,000	\$1,081,600
Oct-18	1.0400	1.0400	\$1,000,000	\$1,040,000
Nov-18		1.0400	\$1,000,000	\$1,040,000
Dec-18		1.0400	\$1,000,000	\$1,040,000
Jan-19		1.0400	\$1,000,000	\$1,040,000
Feb-19		1.0400	\$1,000,000	\$1,040,000
Mar-19		1.0400	\$1,000,000	\$1,040,000
Apr-19		1.0400	\$1,000,000	\$1,040,000
May-19		1.0400	\$1,000,000	\$1,040,000
Jun-19		1.0400	\$1,000,000	\$1,040,000
Jul-19		1.0400	\$1,000,000	\$1,040,000
Aug-19		1.0400	\$1,000,000	\$1,040,000
Sep-19		1.0400	\$1,000,000	\$1,040,000
Oct-19	1.0400	1.0000	\$1,000,000	\$1,000,000

MEDICAL UTILIZATION TREND CALCULATION

Month	Membership	Original Allowed Claims (adjusted to the VHP network)			Adjusted Claims - Normalized for Contract Changes			ASF Normalization Factors		Working Day Normalization Factor		Adjusted Allowed Claims		
		Facility	Professional	Total Allowed Claims	Facility	Professional	Total Allowed Claims	Monthly ASF	ASF Normalization	Working Days	Working Day Normalization	Facility PMPM	Professional PMPM	Total PMPM
Nov-15	57,692	REDACTED										\$316.72	\$138.69	\$455.41
Dec-15	57,890											\$272.01	\$126.86	\$398.88
Jan-16	52,944											\$282.00	\$127.21	\$409.21
Feb-16	52,655											\$284.86	\$126.25	\$411.11
Mar-16	52,655											\$263.10	\$120.68	\$383.78
Apr-16	52,628											\$270.52	\$121.65	\$392.17
May-16	52,040											\$256.29	\$125.21	\$381.51
Jun-16	52,000											\$266.93	\$122.52	\$389.46
Jul-16	51,849											\$272.31	\$117.22	\$389.53
Aug-16	51,743											\$253.14	\$117.81	\$370.95
Sep-16	51,752											\$303.10	\$128.51	\$431.61
Oct-16	51,944											\$285.76	\$131.79	\$417.55
Nov-16	51,926											\$311.53	\$141.71	\$453.23
Dec-16	51,220											\$301.27	\$137.09	\$438.36
Jan-17	54,466											\$276.58	\$131.98	\$408.56
Feb-17	54,376											\$253.40	\$122.58	\$375.98
Mar-17	54,286											\$261.20	\$123.58	\$384.78
Apr-17	54,315											\$261.18	\$129.27	\$390.45
May-17	54,511											\$272.85	\$130.10	\$402.95
Jun-17	54,564											\$265.26	\$124.99	\$390.25
Jul-17	54,781											\$309.21	\$132.88	\$442.08
Aug-17	54,843											\$236.42	\$118.57	\$354.99
Sep-17	54,384											\$262.14	\$130.44	\$392.58
Oct-17	54,362											\$292.42	\$133.33	\$425.75
Nov-17	54,513											\$288.40	\$144.00	\$432.41
Dec-17	54,478											\$316.92	\$136.47	\$453.39
Jan-18	52,507											\$297.59	\$137.07	\$434.66
Feb-18	52,433											\$294.54	\$137.20	\$431.74
Mar-18	52,332											\$259.13	\$131.45	\$390.58
Apr-18	52,560											\$295.32	\$134.77	\$430.08
May-18	52,733											\$271.99	\$136.62	\$408.61
Jun-18	52,720											\$266.88	\$129.44	\$396.32
Jul-18	53,446											\$266.21	\$130.33	\$396.55
Aug-18	53,468											\$266.07	\$122.69	\$388.75
Sep-18	53,278											\$309.27	\$140.30	\$449.57
Oct-18	53,566											\$284.91	\$139.38	\$424.29
Nov-18	53,900											\$282.84	\$140.20	\$423.04
Dec-18	53,803											\$323.57	\$150.72	\$474.29
Jan-19	54,540											\$297.87	\$136.52	\$434.39
Feb-19	54,495											\$295.40	\$135.15	\$430.55
Mar-19	54,459											\$302.63	\$140.46	\$443.09
Apr-19	54,100											\$272.02	\$134.38	\$406.40
May-19	53,986											\$284.05	\$134.84	\$418.89
Jun-19	53,631											\$299.13	\$134.94	\$434.07
Jul-19	52,969											\$304.12	\$135.34	\$439.46
Aug-19	52,672											\$271.78	\$125.85	\$397.63
Sep-19	52,492											\$267.79	\$129.76	\$397.55
Oct-19	52,336											\$320.69	\$143.89	\$464.58

YE 201910 Average: Annual Trend: 3.04% 1.38% 2.50%

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Facility - 48 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-15	57,692	\$316.72	\$273.37		\$273.97							
Dec-15	57,890	\$272.01	\$273.72		\$274.34						\$316.72	
Jan-16	52,944	\$282.00	\$274.09		\$274.71						\$300.66	
Feb-16	52,655	\$284.86	\$274.46		\$275.09						\$293.94	
Mar-16	52,655	\$263.10	\$274.80		\$275.45						\$290.65	
Apr-16	52,628	\$270.52	\$275.17		\$275.82						\$280.73	
May-16	52,040	\$256.29	\$275.53		\$276.19						\$277.02	
Jun-16	52,000	\$266.93	\$275.90		\$276.57						\$269.54	
Jul-16	51,849	\$272.31	\$276.26		\$276.94						\$268.55	
Aug-16	51,743	\$253.14	\$276.63		\$277.31						\$269.86	
Sep-16	51,752	\$303.10	\$277.00		\$277.69						\$263.80	
Oct-16	51,944	\$285.76	\$277.36	\$275.32	\$278.06	\$275.97					\$277.87	
Nov-16	51,926	\$311.53	\$277.73	\$275.70	\$278.44	\$276.36	\$316.72		\$316.72		\$280.67	
Dec-16	51,220	\$301.27	\$278.09	\$276.07	\$278.80	\$276.75	\$271.91		\$271.87		\$291.72	
Jan-17	54,466	\$276.58	\$278.47	\$276.45	\$279.18	\$277.13	\$282.56		\$282.59		\$295.12	
Feb-17	54,376	\$253.40	\$278.84	\$276.82	\$279.56	\$277.51	\$285.58		\$285.61		\$288.44	
Mar-17	54,286	\$261.20	\$279.18	\$277.20	\$279.90	\$277.89	\$263.29		\$263.23		\$275.83	
Apr-17	54,315	\$261.18	\$279.55	\$277.57	\$280.28	\$278.26	\$270.52		\$270.40		\$270.53	
May-17	54,511	\$272.85	\$279.92	\$277.94	\$280.64	\$278.64	\$255.94		\$255.71		\$267.13	
Jun-17	54,564	\$265.26	\$280.29	\$278.30	\$281.02	\$279.01	\$266.71		\$266.47		\$269.14	
Jul-17	54,781	\$309.21	\$280.66	\$278.67	\$281.39	\$279.38	\$271.98		\$271.70		\$267.70	
Aug-17	54,843	\$236.42	\$281.04	\$279.04	\$281.77	\$279.75	\$253.58		\$253.42		\$282.56	
Sep-17	54,384	\$262.14	\$281.41	\$279.40	\$282.14	\$280.12	\$303.55		\$303.31		\$265.95	
Oct-17	54,362	\$292.42	\$281.78	\$279.76	\$282.51	\$280.49	\$285.41	\$277.17	\$285.00	\$277.02	\$264.53	\$276.52
Nov-17	54,513	\$288.40	\$282.16	\$280.13	\$282.89	\$280.85	\$314.14	\$277.11	\$313.75	\$276.93	\$274.50	\$276.02
Dec-17	54,478	\$316.92	\$282.52	\$280.49	\$283.25	\$281.21	\$282.19	\$277.94	\$281.42	\$277.70	\$279.45	\$275.07
Jan-18	52,507	\$297.59	\$282.90	\$280.85	\$283.63	\$281.58	\$278.74	\$277.62	\$278.04	\$277.32	\$292.88	\$274.83
Feb-18	52,433	\$294.54	\$283.28	\$281.21	\$284.01	\$281.94	\$271.74	\$276.48	\$271.13	\$276.13	\$294.55	\$275.29
Mar-18	52,332	\$259.13	\$283.63	\$281.58	\$284.35	\$282.31	\$262.39	\$276.44	\$261.77	\$276.05	\$294.52	\$276.79
Apr-18	52,560	\$295.32	\$284.01	\$281.95	\$284.73	\$282.68	\$267.29	\$276.20	\$266.75	\$275.77	\$281.79	\$277.73
May-18	52,733	\$271.99	\$284.38	\$282.32	\$285.10	\$283.05	\$264.32	\$276.94	\$263.86	\$276.49	\$286.61	\$279.35
Jun-18	52,720	\$266.88	\$284.76	\$282.69	\$285.48	\$283.42	\$268.67	\$277.13	\$268.40	\$276.67	\$281.33	\$280.38
Jul-18	53,446	\$266.21	\$285.13	\$283.07	\$285.84	\$283.79	\$290.10	\$278.65	\$289.56	\$278.17	\$276.10	\$281.11
Aug-18	53,468	\$266.07	\$285.51	\$283.44	\$286.22	\$284.17	\$249.46	\$278.36	\$249.55	\$277.90	\$272.51	\$280.26
Sep-18	53,278	\$309.27	\$285.90	\$283.82	\$286.60	\$284.54	\$291.44	\$277.30	\$291.16	\$276.85	\$270.15	\$280.64
Oct-18	53,566	\$284.91	\$286.27	\$284.20	\$286.96	\$284.92	\$294.22	\$278.03	\$293.84	\$277.58	\$284.16	\$282.31
Nov-18	53,900	\$282.84	\$286.65	\$284.58	\$287.34	\$285.30	\$311.45	\$277.77	\$310.90	\$277.30	\$284.40	\$283.15
Dec-18	53,803	\$323.57	\$287.02	\$284.97	\$287.71	\$285.68	\$303.95	\$279.61	\$303.20	\$279.14	\$283.81	\$283.52
Jan-19	54,540	\$297.87	\$287.41	\$285.34	\$288.09	\$286.05	\$294.70	\$280.97	\$294.40	\$280.53	\$298.06	\$283.99
Feb-19	54,495	\$295.40	\$287.80	\$285.72	\$288.46	\$286.42	\$289.53	\$282.45	\$289.49	\$282.06	\$297.98	\$284.32
Mar-19	54,459	\$302.63	\$288.15	\$286.10	\$288.81	\$286.79	\$269.60	\$282.99	\$270.33	\$282.72	\$297.03	\$284.57
Apr-19	54,100	\$272.02	\$288.53	\$286.47	\$289.18	\$287.16	\$288.59	\$284.74	\$288.80	\$284.53	\$299.02	\$286.01
May-19	53,986	\$284.05	\$288.91	\$286.85	\$289.55	\$287.53	\$277.06	\$285.77	\$277.76	\$285.66	\$289.31	\$286.23
Jun-19	53,631	\$299.13	\$289.30	\$287.22	\$289.93	\$287.90	\$278.03	\$286.52	\$278.87	\$286.50	\$287.39	\$286.73
Jul-19	52,969	\$304.12	\$289.67	\$287.59	\$290.29	\$288.26	\$292.19	\$286.69	\$292.52	\$286.74	\$291.58	\$288.01
Aug-19	52,672	\$271.78	\$290.06	\$287.97	\$290.67	\$288.63	\$267.67	\$288.22	\$269.48	\$288.41	\$296.06	\$289.95
Sep-19	52,492	\$267.79	\$290.45	\$288.34	\$291.05	\$288.99	\$312.77	\$289.95	\$312.42	\$290.14	\$287.32	\$291.37
Oct-19	52,336	\$320.69	\$290.83	\$288.72	\$291.42	\$289.36	\$303.97	\$290.74	\$303.86	\$290.95	\$280.27	\$291.07
Nov-19	52,336		\$291.22	\$289.09	\$291.79	\$289.73	\$314.88	\$290.97	\$314.28	\$291.18	\$294.76	\$291.93
Dec-19	52,336		\$291.60	\$289.47	\$292.16	\$290.10	\$327.94	\$292.90	\$326.45	\$293.05	\$294.74	\$292.84
Jan-20	52,336		\$291.99	\$289.85	\$292.54	\$290.47	\$311.75	\$294.29	\$311.35	\$294.43	\$294.72	\$292.55
Feb-20	52,336		\$292.38	\$290.24	\$292.92	\$290.84	\$307.87	\$295.82	\$307.80	\$295.96	\$294.70	\$292.26
Mar-20	52,336		\$292.75	\$290.63	\$293.27	\$291.22	\$298.33	\$298.28	\$299.14	\$298.42	\$294.68	\$292.05
Apr-20	52,336		\$293.14	\$291.01	\$293.65	\$291.59	\$297.49	\$299.04	\$298.15	\$299.22	\$294.66	\$291.67
May-20	52,336		\$293.52	\$291.40	\$294.01	\$291.97	\$295.40	\$300.62	\$296.42	\$300.83	\$294.64	\$292.12
Jun-20	52,336		\$293.92	\$291.79	\$294.39	\$292.34	\$302.23	\$302.68	\$302.93	\$302.87	\$294.62	\$292.73
Jul-20	52,336		\$294.30	\$292.18	\$294.76	\$292.72	\$312.92	\$304.42	\$312.77	\$304.57	\$294.60	\$292.98
Aug-20	52,336		\$294.69	\$292.57	\$295.14	\$293.09	\$283.41	\$305.75	\$285.64	\$305.94	\$294.57	\$292.86
Sep-20	52,336		\$295.09	\$292.95	\$295.52	\$293.46	\$310.22	\$305.53	\$310.04	\$305.74	\$294.55	\$293.46
Oct-20	52,336		\$295.47	\$293.34	\$295.88	\$293.84	\$327.01	\$307.45	\$326.05	\$307.59	\$294.53	\$294.65
Nov-20	52,336		\$295.87	\$293.73	\$296.26	\$294.21	\$331.34	\$308.83	\$329.75	\$308.87	\$294.51	\$294.63
Dec-20	52,336		\$296.26	\$294.12	\$296.63	\$294.58	\$345.02	\$310.25	\$341.91	\$310.16	\$294.49	\$294.61
Jan-21	52,336		\$296.65	\$294.50	\$297.00	\$294.95	\$327.92	\$311.60	\$326.82	\$311.45	\$294.47	\$294.59
Feb-21	52,336		\$297.05	\$294.89	\$297.38	\$295.32	\$323.76	\$312.92	\$323.27	\$312.74	\$294.45	\$294.56
Mar-21	52,336		\$297.41	\$295.28	\$297.72	\$295.70	\$313.66	\$314.20	\$314.60	\$314.03	\$294.43	\$294.54
Apr-21	52,336		\$297.81	\$295.67	\$298.10	\$296.07	\$312.72	\$315.47	\$313.62	\$315.32	\$294.41	\$294.52
May-21	52,336		\$298.20	\$296.06	\$298.47	\$296.44	\$310.46	\$316.72	\$311.89	\$316.61	\$294.39	\$294.50
Jun-21	52,336		\$298.60	\$296.45	\$298.85	\$296.81	\$317.56	\$318.00	\$318.40	\$317.90	\$294.37	\$294.48
Jul-21	52,336		\$298.99	\$296.84	\$299.21	\$297.18	\$328.73	\$319.32	\$328.24	\$319.19	\$294.35	\$294.46
Aug-21	52,336		\$299.39	\$297.23	\$299.59	\$297.55	\$297.67	\$320.51	\$301.10	\$320.47	\$294.33	\$294.44
Sep-21	52,336		\$299.79	\$297.62	\$299.97	\$297.92	\$325.77	\$321.80	\$325.50	\$321.76	\$294.31	\$294.42
Oct-21	52,336		\$300.18	\$298.02	\$300.33	\$298.29	\$343.33	\$323.16	\$341.52	\$323.05	\$294.29	\$294.40
Nov-21	52,336		\$300.58	\$298.41	\$300.71	\$298.66	\$347.81	\$324.53	\$345.21	\$324.34	\$294.27	\$294.38
Dec-21	52,336		\$300.98	\$298.80	\$301.08	\$299.04	\$362.09	\$325.96	\$357.38	\$325.63	\$294.25	\$294.36
Utilization Trend			1.60%		1.53%		5.42%		5.34%		0.52%	
RMSE (root mean square error)			18.41		18.25		21.22		21.20		22.44	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Facility - 36 Month

Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-16	51,926	\$311.53	\$274.64		\$275.48							
Dec-16	51,220	\$301.27	\$275.14		\$275.99						\$311.53	
Jan-17	54,466	\$276.58	\$275.67		\$276.52						\$307.95	
Feb-17	54,376	\$253.40	\$276.19		\$277.04						\$296.99	
Mar-17	54,286	\$261.20	\$276.67		\$277.52						\$281.75	
Apr-17	54,315	\$261.18	\$277.19		\$278.05						\$274.55	
May-17	54,511	\$272.85	\$277.71		\$278.56						\$269.84	
Jun-17	54,564	\$265.26	\$278.23		\$279.08						\$270.85	
Jul-17	54,781	\$309.21	\$278.75		\$279.59						\$268.86	
Aug-17	54,843	\$236.42	\$279.28		\$280.12						\$282.91	
Sep-17	54,384	\$262.14	\$279.81		\$280.65						\$266.64	
Oct-17	54,362	\$292.42	\$280.33	\$277.49	\$281.16	\$278.34					\$265.03	
Nov-17	54,513	\$288.40	\$280.86	\$278.00	\$281.68	\$278.85	\$311.53		\$311.53		\$274.55	\$280.80
Dec-17	54,478	\$316.92	\$281.38	\$278.51	\$282.19	\$279.35	\$300.78		\$300.53		\$279.35	\$278.27
Jan-18	52,507	\$297.59	\$281.91	\$279.02	\$282.72	\$279.86	\$276.24		\$276.05		\$292.44	\$276.93
Feb-18	52,433	\$294.54	\$282.45	\$279.53	\$283.25	\$280.37	\$253.45		\$253.47		\$294.22	\$276.65
Mar-18	52,332	\$259.13	\$282.94	\$280.05	\$283.72	\$280.87	\$262.33		\$262.79		\$294.31	\$277.65
Apr-18	52,560	\$295.32	\$283.48	\$280.56	\$284.25	\$281.39	\$262.86		\$263.41		\$282.01	\$278.26
May-18	52,733	\$271.99	\$284.00	\$281.09	\$284.76	\$281.90	\$275.96		\$276.81		\$286.63	\$279.66
Jun-18	52,720	\$266.88	\$284.54	\$281.61	\$285.29	\$282.42	\$269.15		\$270.20		\$281.49	\$280.56
Jul-18	53,446	\$266.21	\$285.06	\$282.15	\$285.80	\$282.94	\$314.74		\$315.11		\$276.36	\$281.21
Aug-18	53,468	\$266.07	\$285.61	\$282.68	\$286.32	\$283.47	\$240.63		\$241.78		\$272.78	\$280.36
Sep-18	53,278	\$309.27	\$286.15	\$283.21	\$286.85	\$283.99	\$267.85				\$270.40	\$280.69
Oct-18	53,566	\$284.91	\$286.68	\$283.75	\$287.36	\$284.51	\$300.62	\$278.21	\$300.92	\$278.64	\$283.93	\$282.30
Nov-18	53,900	\$282.84	\$287.22	\$284.29	\$287.89	\$285.04	\$312.51	\$278.26	\$312.37	\$278.68	\$284.25	\$283.13
Dec-18	53,803	\$323.57	\$287.75	\$284.83	\$288.40	\$285.57	\$317.41	\$279.64	\$316.52	\$280.00	\$283.73	\$283.50
Jan-19	54,540	\$297.87	\$288.30	\$285.37	\$288.92	\$286.09	\$294.83	\$281.22	\$294.56	\$281.57	\$297.62	\$283.97
Feb-19	54,495	\$295.40	\$288.85	\$285.90	\$289.45	\$286.61	\$279.19	\$283.32	\$279.28	\$283.68	\$297.69	\$284.30
Mar-19	54,459	\$302.63	\$289.35	\$286.44	\$289.93	\$287.12	\$271.55	\$284.03	\$272.15	\$284.40	\$296.88	\$284.55
Apr-19	54,100	\$272.02	\$289.90	\$286.97	\$290.45	\$287.64	\$286.90	\$286.00	\$286.99	\$286.33	\$298.87	\$285.96
May-19	53,986	\$284.05	\$290.43	\$287.50	\$290.96	\$288.15	\$286.27	\$286.84	\$286.26	\$287.10	\$289.48	\$286.20
Jun-19	53,631	\$299.13	\$290.99	\$288.03	\$291.49	\$288.66	\$280.08	\$287.72	\$280.34	\$287.92	\$287.57	\$286.70
Jul-19	52,969	\$304.12	\$291.52	\$288.56	\$292.00	\$289.17	\$310.62	\$287.37	\$309.53	\$287.44	\$291.58	\$287.95
Aug-19	52,672	\$271.78	\$292.08	\$289.10	\$292.53	\$289.68	\$262.79	\$289.23	\$264.52	\$289.35	\$295.94	\$289.86
Sep-19	52,492	\$267.79	\$292.63	\$289.63	\$293.05	\$290.19	\$298.02	\$291.71	\$297.74	\$291.75	\$287.49	\$291.28
Oct-19	52,336	\$320.69	\$293.17	\$290.16	\$293.56	\$290.70	\$309.39	\$292.41	\$307.97	\$292.30	\$280.59	\$291.02
Nov-19	52,336		\$293.73	\$290.70	\$294.09	\$291.21	\$316.93	\$292.72	\$315.24	\$292.49	\$294.56	\$291.88
Dec-19	52,336		\$294.27	\$291.24	\$294.60	\$291.72	\$336.81	\$294.25	\$333.78	\$293.84	\$294.54	\$292.78
Jan-20	52,336		\$294.83	\$291.78	\$295.13	\$292.24	\$312.14	\$295.67	\$310.82	\$295.17	\$294.53	\$292.51
Feb-20	52,336		\$295.40	\$292.33	\$295.65	\$292.76	\$301.07	\$297.53	\$300.57	\$296.98	\$294.51	\$292.23
Mar-20	52,336		\$295.92	\$292.89	\$296.15	\$293.29	\$298.75	\$299.86	\$298.57	\$299.24	\$294.50	\$292.02
Apr-20	52,336		\$296.49	\$293.44	\$296.67	\$293.81	\$296.52	\$300.69	\$296.18	\$300.04	\$294.48	\$291.63
May-20	52,336		\$297.03	\$294.00	\$297.18	\$294.33	\$300.90	\$301.94	\$300.37	\$301.25	\$294.46	\$292.05
Jun-20	52,336		\$297.60	\$294.55	\$297.71	\$294.86	\$302.63	\$303.86	\$302.15	\$303.10	\$294.45	\$292.64
Jul-20	52,336		\$298.15	\$295.11	\$298.22	\$295.38	\$324.42	\$305.01	\$322.01	\$304.14	\$294.43	\$292.87
Aug-20	52,336		\$298.71	\$295.66	\$298.75	\$295.90	\$279.99	\$306.46	\$281.56	\$305.58	\$294.42	\$292.75
Sep-20	52,336		\$299.28	\$296.22	\$299.27	\$296.42	\$301.46	\$306.75	\$300.92	\$305.85	\$294.40	\$293.32
Oct-20	52,336		\$299.83	\$296.77	\$299.78	\$296.93	\$329.91	\$308.46	\$327.35	\$307.46	\$294.38	\$294.47
Nov-20	52,336		\$300.41	\$297.33	\$300.31	\$297.45	\$333.26	\$309.82	\$329.77	\$308.67	\$294.37	\$294.46
Dec-20	52,336		\$300.96	\$297.88	\$300.82	\$297.97	\$354.09	\$311.26	\$348.31	\$309.88	\$294.35	\$294.44
Jan-21	52,336		\$301.53	\$298.44	\$301.35	\$298.49	\$328.09	\$312.59	\$325.35	\$311.09	\$294.34	\$294.42
Feb-21	52,336		\$302.11	\$299.00	\$301.87	\$299.01	\$316.39	\$313.87	\$315.10	\$312.30	\$294.32	\$294.41
Mar-21	52,336		\$302.63	\$299.56	\$302.35	\$299.52	\$313.89	\$315.13	\$313.10	\$313.51	\$294.30	\$294.39
Apr-21	52,336		\$303.20	\$300.12	\$302.88	\$300.04	\$311.48	\$316.38	\$310.71	\$314.73	\$294.29	\$294.38
May-21	52,336		\$303.76	\$300.68	\$303.39	\$300.56	\$316.02	\$317.64	\$314.90	\$315.94	\$294.27	\$294.36
Jun-21	52,336		\$304.34	\$301.24	\$303.91	\$301.08	\$317.77	\$318.90	\$316.68	\$317.15	\$294.25	\$294.34
Jul-21	52,336		\$304.90	\$301.81	\$304.42	\$301.59	\$340.58	\$320.24	\$336.54	\$318.36	\$294.24	\$294.33
Aug-21	52,336		\$305.48	\$302.37	\$304.95	\$302.11	\$293.88	\$321.40	\$296.09	\$319.57	\$294.22	\$294.31
Sep-21	52,336		\$306.06	\$302.93	\$305.48	\$302.63	\$316.36	\$322.64	\$315.45	\$320.78	\$294.21	\$294.30
Oct-21	52,336		\$306.63	\$303.50	\$305.99	\$303.14	\$346.15	\$324.00	\$341.88	\$321.99	\$294.19	\$294.28
Nov-21	52,336		\$307.21	\$304.07	\$306.51	\$303.66	\$349.60	\$325.36	\$344.30	\$323.20	\$294.17	\$294.26
Dec-21	52,336		\$307.78	\$304.64	\$307.02	\$304.18	\$371.38	\$326.80	\$362.84	\$324.41	\$294.16	\$294.25
Utilization Trend			2.27%		2.11%		5.27%		4.93%		0.51%	
RMSE (root mean square error)			18.22		18.11		23.18		23.05		23.04	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Facility - 24 Month

Month	Membership	Adjusted Allowed Claims PMPM	Utilization Trend Calculation - Facility - 24 Month									
			Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-17	54,513	\$288.40	\$285.76		286.28627							
Dec-17	54,478	\$316.92	\$286.00		\$286.53						\$288.40	
Jan-18	52,507	\$297.59	\$286.25		\$286.78						\$288.43	
Feb-18	52,433	\$294.54	\$286.50		\$287.04						\$288.44	
Mar-18	52,332	\$259.13	\$286.72		\$287.26						\$288.45	
Apr-18	52,560	\$295.32	\$286.97		\$287.52						\$288.42	
May-18	52,733	\$271.99	\$287.21		\$287.76						\$288.43	
Jun-18	52,720	\$266.88	\$287.46		\$288.01						\$288.41	
Jul-18	53,446	\$266.21	\$287.70		\$288.26						\$288.39	
Aug-18	53,468	\$266.07	\$287.94		\$288.51						\$288.37	
Sep-18	53,278	\$309.27	\$288.19		\$288.76						\$288.34	
Oct-18	53,566	\$284.91	\$288.43	\$287.09	\$289.01	\$287.64					\$288.36	
Nov-18	53,900	\$282.84	\$288.68	\$287.34	\$289.26	\$287.89	\$288.40		\$288.40		\$288.36	\$288.40
Dec-18	53,803	\$323.57	\$288.92	\$287.59	\$289.50	\$288.15	\$316.77		\$316.73		\$288.36	\$288.40
Jan-19	54,540	\$297.87	\$289.17	\$287.83	\$289.76	\$288.40	\$297.54		\$297.54		\$288.39	\$288.39
Feb-19	54,495	\$295.40	\$289.42	\$288.08	\$290.01	\$288.65	\$294.50		\$294.52		\$288.40	\$288.39
Mar-19	54,459	\$302.63	\$289.65	\$288.32	\$290.24	\$288.89	\$259.13		\$259.17		\$288.41	\$288.39
Apr-19	54,100	\$272.02	\$289.90	\$288.57	\$290.49	\$289.14	\$296.55		\$296.91		\$288.42	\$288.39
May-19	53,986	\$284.05	\$290.14	\$288.81	\$290.73	\$289.38	\$273.15		\$273.51		\$288.41	\$288.39
Jun-19	53,631	\$299.13	\$290.39	\$289.05	\$290.99	\$289.63	\$268.57		\$269.13		\$288.40	\$288.38
Jul-19	52,969	\$304.12	\$290.64	\$289.29	\$291.23	\$289.87	\$269.07		\$270.05		\$288.41	\$288.39
Aug-19	52,672	\$271.78	\$290.89	\$289.53	\$291.48	\$290.12	\$270.58		\$272.15		\$288.43	\$288.39
Sep-19	52,492	\$267.79	\$291.14	\$289.77	\$291.73	\$290.36	\$315.97		\$317.00		\$288.41	\$288.40
Oct-19	52,336	\$320.69	\$291.38	\$290.02	\$291.98	\$290.61	\$291.33	\$286.78	\$292.59	\$287.28	\$288.39	\$288.40
Nov-19	52,336		\$291.63	\$290.26	\$292.23	\$290.85	\$290.78	\$286.97	\$292.39	\$287.60	\$288.42	\$288.40
Dec-19	52,336		\$291.88	\$290.51	\$292.48	\$291.10	\$333.93	\$288.30	\$334.37	\$288.98	\$288.42	\$288.41
Jan-20	52,336		\$292.13	\$290.75	\$292.73	\$291.35	\$308.60	\$289.18	\$309.93	\$289.97	\$288.42	\$288.41
Feb-20	52,336		\$292.38	\$291.00	\$292.98	\$291.60	\$307.20	\$290.20	\$308.71	\$291.12	\$288.42	\$288.41
Mar-20	52,336		\$292.62	\$291.25	\$293.22	\$291.85	\$315.22	\$294.94	\$316.38	\$295.95	\$288.42	\$288.41
Apr-20	52,336		\$292.87	\$291.50	\$293.47	\$292.10	\$284.18	\$293.91	\$286.76	\$295.11	\$288.42	\$288.41
May-20	52,336		\$293.11	\$291.75	\$293.71	\$292.35	\$297.38	\$295.98	\$299.50	\$297.32	\$288.42	\$288.41
Jun-20	52,336		\$293.37	\$292.00	\$293.97	\$292.60	\$313.40	\$299.76	\$314.77	\$301.17	\$288.42	\$288.42
Jul-20	52,336		\$293.61	\$292.25	\$294.21	\$292.85	\$318.38	\$303.90	\$319.38	\$305.31	\$288.42	\$288.42
Aug-20	52,336		\$293.87	\$292.50	\$294.46	\$293.10	\$284.32	\$305.06	\$286.71	\$306.54	\$288.42	\$288.42
Sep-20	52,336		\$294.12	\$292.75	\$294.72	\$293.35	\$280.50	\$302.10	\$283.26	\$303.73	\$288.42	\$288.42
Oct-20	52,336		\$294.37	\$293.00	\$294.96	\$293.59	\$335.76	\$305.80	\$336.08	\$307.35	\$288.42	\$288.42
Nov-20	52,336		\$294.62	\$293.25	\$295.21	\$293.84	\$304.42	\$306.94	\$307.81	\$308.64	\$288.42	\$288.42
Dec-20	52,336		\$294.87	\$293.49	\$295.46	\$294.09	\$349.53	\$308.24	\$349.79	\$309.92	\$288.42	\$288.42
Jan-21	52,336		\$295.12	\$293.74	\$295.71	\$294.34	\$322.96	\$309.44	\$325.35	\$311.21	\$288.42	\$288.42
Feb-21	52,336		\$295.38	\$293.99	\$295.96	\$294.59	\$321.44	\$310.62	\$324.13	\$312.49	\$288.42	\$288.42
Mar-21	52,336		\$295.61	\$294.24	\$296.19	\$294.84	\$329.78	\$311.84	\$331.80	\$313.78	\$288.42	\$288.42
Apr-21	52,336		\$295.86	\$294.49	\$296.44	\$295.08	\$297.25	\$312.93	\$302.18	\$315.06	\$288.42	\$288.42
May-21	52,336		\$296.11	\$294.74	\$296.69	\$295.33	\$311.00	\$314.06	\$314.92	\$316.35	\$288.42	\$288.42
Jun-21	52,336		\$296.37	\$294.99	\$296.94	\$295.58	\$327.71	\$315.25	\$330.19	\$317.63	\$288.42	\$288.42
Jul-21	52,336		\$296.61	\$295.24	\$297.18	\$295.83	\$332.85	\$316.46	\$334.80	\$318.92	\$288.42	\$288.42
Aug-21	52,336		\$296.87	\$295.49	\$297.44	\$296.07	\$297.20	\$317.53	\$302.13	\$320.20	\$288.42	\$288.42
Sep-21	52,336		\$297.13	\$295.74	\$297.69	\$296.32	\$293.16	\$318.59	\$298.68	\$321.49	\$288.42	\$288.42
Oct-21	52,336		\$297.37	\$295.99	\$297.93	\$296.57	\$350.85	\$319.85	\$351.50	\$322.77	\$288.42	\$288.42
Nov-21	52,336		\$297.63	\$296.24	\$298.18	\$296.82	\$318.06	\$320.98	\$323.23	\$324.06	\$288.42	\$288.42
Dec-21	52,336		\$297.88	\$296.49	\$298.43	\$297.06	\$365.13	\$322.28	\$365.21	\$325.34	\$288.42	\$288.42
Utilization Trend			1.02%		1.02%		5.54%		5.91%		0.00%	
RMSE (root mean square error)			18.02		17.92		25.88		25.77		18.67	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Professional - 48 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-15	57,692	\$138.69	\$125.28		\$125.38							
Dec-15	57,890	\$126.86	\$125.54		\$125.65						\$138.69	
Jan-16	52,944	\$127.21	\$125.80		\$125.92						\$131.16	
Feb-16	52,655	\$126.25	\$126.07		\$126.20						\$128.63	
Mar-16	52,655	\$120.68	\$126.32		\$126.45						\$127.11	
Apr-16	52,628	\$121.65	\$126.58		\$126.73						\$123.00	
May-16	52,040	\$125.21	\$126.84		\$126.99						\$122.12	
Jun-16	52,000	\$122.52	\$127.11		\$127.27						\$124.07	
Jul-16	51,849	\$117.22	\$127.37		\$127.54						\$123.07	
Aug-16	51,743	\$117.81	\$127.64		\$127.81						\$119.33	
Sep-16	51,752	\$128.51	\$127.90		\$128.09						\$118.34	
Oct-16	51,944	\$131.79	\$128.16	\$126.69	\$128.35	\$126.84					\$124.80	
Nov-16	51,926	\$141.71	\$128.43	\$126.96	\$128.63	\$127.12	\$138.69		\$138.69		\$129.24	
Dec-16	51,220	\$137.09	\$128.70	\$127.24	\$128.89	\$127.40	\$127.05		\$127.07		\$137.17	
Jan-17	54,466	\$131.98	\$128.97	\$127.51	\$129.17	\$127.68	\$128.18		\$128.23		\$137.12	
Feb-17	54,376	\$122.58	\$129.24	\$127.78	\$129.44	\$127.95	\$127.92		\$128.00		\$133.84	
Mar-17	54,286	\$123.58	\$129.48	\$128.05	\$129.69	\$128.23	\$122.46		\$122.64		\$126.66	
Apr-17	54,315	\$129.27	\$129.76	\$128.32	\$129.97	\$128.50	\$123.89		\$124.07		\$124.69	
May-17	54,511	\$130.10	\$130.02	\$128.58	\$130.23	\$128.77	\$128.32		\$128.44		\$127.59	
Jun-17	54,564	\$124.99	\$130.30	\$128.85	\$130.51	\$129.05	\$126.28		\$126.48		\$129.18	
Jul-17	54,781	\$132.88	\$130.56	\$129.12	\$130.77	\$129.32	\$121.35		\$121.75		\$126.50	
Aug-17	54,843	\$118.57	\$130.84	\$129.38	\$131.05	\$129.58	\$123.35		\$123.75		\$130.55	
Sep-17	54,384	\$130.44	\$131.11	\$129.65	\$131.32	\$129.85	\$135.26		\$135.09		\$122.91	
Oct-17	54,362	\$133.33	\$131.38	\$129.91	\$131.59	\$130.12	\$139.30	\$128.46	\$138.88	\$128.55	\$127.69	\$129.39
Nov-17	54,513	\$144.00	\$131.65	\$130.17	\$131.86	\$130.38	\$148.31	\$129.31	\$147.29	\$129.31	\$131.27	\$129.56
Dec-17	54,478	\$136.47	\$131.92	\$130.44	\$132.13	\$130.65	\$139.20	\$130.31	\$138.56	\$130.26	\$139.37	\$129.78
Jan-18	52,507	\$137.07	\$132.20	\$130.70	\$132.41	\$130.91	\$136.96	\$131.03	\$136.55	\$130.94	\$137.53	\$129.79
Feb-18	52,433	\$137.20	\$132.48	\$130.97	\$132.68	\$131.18	\$132.14	\$131.38	\$132.17	\$131.28	\$137.23	\$130.05
Mar-18	52,332	\$131.45	\$132.73	\$131.23	\$132.93	\$131.44	\$129.73	\$131.99	\$129.86	\$131.89	\$137.21	\$130.92
Apr-18	52,560	\$134.77	\$133.01	\$131.50	\$133.20	\$131.71	\$133.27	\$132.77	\$133.16	\$132.65	\$133.54	\$131.65
May-18	52,733	\$136.62	\$133.28	\$131.77	\$133.47	\$131.98	\$136.12	\$133.43	\$135.92	\$133.27	\$134.32	\$132.22
Jun-18	52,720	\$129.44	\$133.56	\$132.05	\$133.74	\$132.25	\$132.44	\$133.95	\$132.59	\$133.80	\$135.78	\$132.77
Jul-18	53,446	\$130.33	\$133.83	\$132.32	\$134.01	\$132.52	\$132.79	\$134.93	\$132.83	\$134.74	\$131.74	\$132.22
Aug-18	53,468	\$122.69	\$134.12	\$132.60	\$134.29	\$132.79	\$126.46	\$135.22	\$127.09	\$135.05	\$130.84	\$133.25
Sep-18	53,278	\$140.30	\$134.40	\$132.88	\$134.56	\$133.07	\$138.26	\$135.47	\$138.11	\$135.30	\$125.64	\$133.49
Oct-18	53,566	\$139.38	\$134.67	\$133.15	\$134.83	\$133.34	\$141.77	\$135.67	\$141.44	\$135.51	\$134.97	\$134.11
Nov-18	53,900	\$140.20	\$134.96	\$133.43	\$135.10	\$133.62	\$151.69	\$135.94	\$150.69	\$135.78	\$137.77	\$134.66
Dec-18	53,803	\$150.72	\$135.23	\$133.72	\$135.37	\$133.89	\$142.21	\$136.19	\$141.74	\$136.05	\$139.32	\$134.65
Jan-19	54,540	\$136.52	\$135.52	\$133.99	\$135.64	\$134.16	\$141.41	\$136.58	\$141.12	\$136.44	\$146.58	\$135.43
Feb-19	54,495	\$135.15	\$135.80	\$134.27	\$135.92	\$134.43	\$138.17	\$137.07	\$138.15	\$136.94	\$140.18	\$135.69
Mar-19	54,459	\$140.46	\$136.06	\$134.55	\$136.17	\$134.70	\$133.39	\$137.36	\$133.61	\$137.23	\$136.98	\$135.68
Apr-19	54,100	\$134.38	\$136.35	\$134.82	\$136.44	\$134.97	\$136.73	\$137.64	\$136.76	\$137.52	\$139.19	\$136.15
May-19	53,986	\$134.84	\$136.62	\$135.10	\$136.71	\$135.24	\$138.56	\$137.84	\$138.52	\$137.74	\$136.13	\$136.29
Jun-19	53,631	\$134.94	\$136.91	\$135.38	\$136.98	\$135.51	\$132.53	\$137.84	\$132.82	\$137.75	\$135.30	\$136.25
Jul-19	52,969	\$135.34	\$137.19	\$135.65	\$137.25	\$135.77	\$132.86	\$137.85	\$133.06	\$137.77	\$135.07	\$136.53
Aug-19	52,672	\$125.85	\$137.48	\$135.93	\$137.52	\$136.04	\$125.82	\$137.81	\$126.42	\$137.73	\$135.24	\$136.90
Sep-19	52,492	\$129.76	\$137.77	\$136.20	\$137.80	\$136.30	\$140.22	\$137.97	\$140.11	\$137.89	\$129.26	\$137.20
Oct-19	52,336	\$143.89	\$138.05	\$136.48	\$138.06	\$136.57	\$140.84	\$137.89	\$140.67	\$137.82	\$129.57	\$136.77
Nov-19	52,336		\$138.34	\$136.76	\$138.34	\$136.84	\$146.66	\$137.44	\$146.25	\$137.43	\$138.68	\$136.84
Dec-19	52,336		\$138.62	\$137.04	\$138.61	\$137.10	\$146.09	\$137.75	\$145.59	\$137.74	\$138.68	\$136.78
Jan-20	52,336		\$138.91	\$137.33	\$138.88	\$137.38	\$138.97	\$137.54	\$138.74	\$137.53	\$138.68	\$136.10
Feb-20	52,336		\$139.21	\$137.61	\$139.16	\$137.65	\$136.56	\$137.40	\$136.40	\$137.38	\$138.68	\$135.96
Mar-20	52,336		\$139.48	\$137.90	\$139.41	\$137.92	\$136.15	\$137.64	\$135.90	\$137.58	\$138.68	\$136.10
Apr-20	52,336		\$139.77	\$138.19	\$139.69	\$138.19	\$134.95	\$137.50	\$134.70	\$137.42	\$138.68	\$136.05
May-20	52,336		\$140.06	\$138.48	\$139.95	\$138.47	\$136.07	\$137.29	\$135.77	\$137.18	\$138.68	\$136.26
Jun-20	52,336		\$140.35	\$138.77	\$140.23	\$138.74	\$132.73	\$137.32	\$132.46	\$137.16	\$138.68	\$136.54
Jul-20	52,336		\$140.64	\$139.05	\$140.49	\$139.01	\$132.85	\$137.32	\$132.49	\$137.12	\$138.68	\$136.85
Aug-20	52,336		\$140.93	\$139.34	\$140.77	\$139.28	\$124.52	\$137.22	\$124.34	\$136.95	\$138.68	\$137.13
Sep-20	52,336		\$141.23	\$139.63	\$141.04	\$139.55	\$134.08	\$136.71	\$133.80	\$136.43	\$138.68	\$137.92
Oct-20	52,336		\$141.52	\$139.92	\$141.31	\$139.82	\$140.86	\$136.71	\$140.38	\$136.40	\$138.68	\$138.68
Nov-20	52,336		\$141.82	\$140.21	\$141.59	\$140.09	\$145.23	\$136.59	\$144.54	\$136.26	\$138.68	\$138.68
Dec-20	52,336		\$142.11	\$140.50	\$141.85	\$140.36	\$144.66	\$136.47	\$143.87	\$136.12	\$138.68	\$138.68
Jan-21	52,336		\$142.41	\$140.79	\$142.13	\$140.64	\$137.62	\$136.36	\$137.03	\$135.97	\$138.68	\$138.68
Feb-21	52,336		\$142.70	\$141.08	\$142.40	\$140.91	\$135.23	\$136.25	\$134.68	\$135.83	\$138.68	\$138.68
Mar-21	52,336		\$142.98	\$141.38	\$142.65	\$141.18	\$134.82	\$136.14	\$134.18	\$135.69	\$138.69	\$138.68
Apr-21	52,336		\$143.28	\$141.67	\$142.93	\$141.45	\$133.63	\$136.03	\$132.99	\$135.54	\$138.69	\$138.68
May-21	52,336		\$143.57	\$141.96	\$143.19	\$141.72	\$134.73	\$135.91	\$134.06	\$135.40	\$138.69	\$138.68
Jun-21	52,336		\$143.87	\$142.25	\$143.47	\$141.99	\$131.43	\$135.81	\$130.74	\$135.26	\$138.69	\$138.68
Jul-21	52,336		\$144.16	\$142.55	\$143.73	\$142.25	\$131.55	\$135.70	\$130.78	\$135.12	\$138.69	\$138.68
Aug-21	52,336		\$144.47	\$142.84	\$144.01	\$142.52	\$123.30	\$135.60	\$122.62	\$134.97	\$138.69	\$138.69
Sep-21	52,336		\$144.77	\$143.14	\$144.28	\$142.79	\$132.76	\$135.49	\$132.09	\$134.83	\$138.69	\$138.69
Oct-21	52,336		\$145.07	\$143.43	\$144.55	\$143.06	\$139.48	\$135.37	\$138.67	\$134.69	\$138.69	\$138.69
Nov-21	52,336		\$145.37	\$143.73	\$144.82	\$143.33	\$143.80	\$135.25	\$142.82	\$134.54	\$138.69	\$138.69
Dec-21	52,336		\$145.67	\$144.03	\$145.09	\$143.60	\$143.24	\$135.13	\$142.16	\$134.40	\$138.69	\$138.69
Utilization Trend			2.51%		2.35%		-0.93%		-1.15%		0.65%	
RMSE (root mean square error)			6.68		6.66		5.10		4.98		6.82	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Professional - 36 Month												
Month	Membership		Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-16	51,926	\$141.71	\$130.37		\$130.53							
Dec-16	51,220	\$137.09	\$130.55		\$130.71						\$141.71	
Jan-17	54,466	\$131.98	\$130.74		\$130.91						\$139.24	
Feb-17	54,376	\$122.58	\$130.93		\$131.10						\$135.36	
Mar-17	54,286	\$123.58	\$131.11		\$131.28						\$128.54	
Apr-17	54,315	\$129.27	\$131.30		\$131.47						\$125.88	
May-17	54,511	\$130.10	\$131.48		\$131.66						\$127.67	
Jun-17	54,564	\$124.99	\$131.68		\$131.85						\$128.95	
Jul-17	54,781	\$132.88	\$131.86		\$132.04						\$126.82	
Aug-17	54,843	\$118.57	\$132.06		\$132.23						\$130.04	
Sep-17	54,384	\$130.44	\$132.25		\$132.42						\$123.91	
Oct-17	54,362	\$133.33	\$132.44	\$131.41	\$132.61	\$131.57					\$127.38	
Nov-17	54,513	\$144.00	\$132.63	\$131.59	\$132.80	\$131.76	\$141.71		\$141.71		\$130.54	\$130.45
Dec-17	54,478	\$136.47	\$132.82	\$131.77	\$132.99	\$131.95	\$137.38		\$137.42		\$137.71	\$130.17
Jan-18	52,507	\$137.07	\$133.01	\$131.96	\$133.18	\$132.13	\$132.15		\$132.18		\$137.05	\$129.97
Feb-18	52,433	\$137.20	\$133.20	\$132.15	\$133.38	\$132.32	\$123.33		\$123.49		\$137.05	\$130.09
Mar-18	52,332	\$131.45	\$133.38	\$132.33	\$133.55	\$132.51	\$126.17		\$126.47		\$137.13	\$130.79
Apr-18	52,560	\$134.77	\$133.58	\$132.52	\$133.74	\$132.69	\$132.80		\$132.98		\$134.09	\$131.47
May-18	52,733	\$136.62	\$133.76	\$132.71	\$133.93	\$132.88	\$134.04		\$134.22		\$134.45	\$132.03
Jun-18	52,720	\$129.44	\$133.96	\$132.90	\$134.12	\$133.07	\$129.23		\$129.61		\$135.60	\$132.59
Jul-18	53,446	\$130.33	\$134.15	\$133.09	\$134.31	\$133.26	\$137.58		\$137.64		\$132.31	\$133.06
Aug-18	53,468	\$122.69	\$134.35	\$133.29	\$134.50	\$133.46	\$122.08		\$122.48		\$131.25	\$133.16
Sep-18	53,278	\$140.30	\$134.54	\$133.48	\$134.70	\$133.65	\$134.51		\$134.50		\$126.67	\$133.41
Oct-18	53,566	\$139.38	\$134.73	\$133.67	\$134.88	\$133.84	\$138.38	\$132.50	\$138.35	\$132.64	\$133.93	\$133.97
Nov-18	53,900	\$140.20	\$134.93	\$133.87	\$135.08	\$134.03	\$148.14	\$133.03	\$147.68	\$133.13	\$136.83	\$134.50
Dec-18	53,803	\$150.72	\$135.12	\$134.07	\$135.26	\$134.23	\$141.46	\$133.37	\$141.26	\$133.45	\$138.62	\$134.58
Jan-19	54,540	\$136.52	\$135.32	\$134.26	\$135.46	\$134.42	\$139.38	\$133.99	\$139.27	\$134.05	\$145.08	\$135.27
Feb-19	54,495	\$135.15	\$135.51	\$134.45	\$135.65	\$134.61	\$132.28	\$134.71	\$132.16	\$134.76	\$140.52	\$135.57
Mar-19	54,459	\$140.46	\$135.69	\$134.64	\$135.83	\$134.80	\$131.02	\$135.10	\$131.28	\$135.14	\$137.65	\$135.62
Apr-19	54,100	\$134.38	\$135.89	\$134.84	\$136.02	\$134.99	\$137.33	\$135.47	\$137.55	\$135.52	\$139.15	\$136.04
May-19	53,986	\$134.84	\$136.08	\$135.03	\$136.21	\$135.17	\$138.25	\$135.82	\$138.35	\$135.86	\$136.60	\$136.22
Jun-19	53,631	\$134.94	\$136.28	\$135.22	\$136.40	\$135.36	\$131.85	\$136.03	\$132.23	\$136.07	\$135.65	\$136.22
Jul-19	52,969	\$135.34	\$136.48	\$135.41	\$136.59	\$135.55	\$138.34	\$136.09	\$138.68	\$136.15	\$135.27	\$136.47
Aug-19	52,672	\$125.85	\$136.67	\$135.60	\$136.78	\$135.74	\$125.60	\$136.39	\$126.25	\$136.48	\$135.30	\$136.80
Sep-19	52,492	\$129.76	\$136.87	\$135.79	\$136.97	\$135.92	\$140.06	\$136.85	\$139.84	\$136.91	\$130.25	\$137.11
Oct-19	52,336	\$143.89	\$137.07	\$135.99	\$137.16	\$136.11	\$140.41	\$137.01	\$140.14	\$137.06	\$129.98	\$136.79
Nov-19	52,336		\$137.27	\$136.18	\$137.35	\$136.30	\$147.70	\$136.95	\$147.42	\$137.01	\$137.39	\$136.84
Dec-19	52,336		\$137.46	\$136.37	\$137.54	\$136.49	\$147.50	\$137.43	\$146.84	\$137.46	\$137.38	\$136.73
Jan-20	52,336		\$137.66	\$136.57	\$137.73	\$136.68	\$140.29	\$137.50	\$140.08	\$137.52	\$137.38	\$136.07
Feb-20	52,336		\$137.86	\$136.77	\$137.93	\$136.87	\$135.29	\$137.76	\$134.96	\$137.76	\$137.38	\$135.80
Mar-20	52,336		\$138.05	\$136.96	\$138.11	\$137.06	\$135.73	\$138.17	\$135.39	\$138.13	\$137.37	\$135.77
Apr-20	52,336		\$138.25	\$137.16	\$138.30	\$137.25	\$136.86	\$138.14	\$136.83	\$138.07	\$137.37	\$135.61
May-20	52,336		\$138.45	\$137.36	\$138.49	\$137.44	\$137.95	\$138.11	\$137.90	\$138.03	\$137.36	\$135.67
Jun-20	52,336		\$138.65	\$137.56	\$138.68	\$137.63	\$133.98	\$138.30	\$133.98	\$138.19	\$137.36	\$135.81
Jul-20	52,336		\$138.85	\$137.76	\$138.87	\$137.83	\$138.11	\$138.28	\$138.29	\$138.15	\$137.36	\$135.99
Aug-20	52,336		\$139.05	\$137.96	\$139.06	\$138.02	\$126.66	\$138.38	\$127.10	\$138.23	\$137.35	\$136.16
Sep-20	52,336		\$139.25	\$138.16	\$139.25	\$138.21	\$137.75	\$138.19	\$137.97	\$138.08	\$137.35	\$136.75
Oct-20	52,336		\$139.45	\$138.36	\$139.44	\$138.40	\$143.87	\$138.47	\$143.58	\$138.36	\$137.34	\$137.37
Nov-20	52,336		\$139.66	\$138.55	\$139.63	\$138.59	\$149.70	\$138.64	\$149.28	\$138.52	\$137.34	\$137.36
Dec-20	52,336		\$139.85	\$138.75	\$139.82	\$138.78	\$149.49	\$138.81	\$148.71	\$138.67	\$137.34	\$137.36
Jan-21	52,336		\$140.06	\$138.95	\$140.02	\$138.97	\$142.18	\$138.96	\$141.94	\$138.83	\$137.33	\$137.35
Feb-21	52,336		\$140.26	\$139.15	\$140.21	\$139.16	\$137.11	\$139.12	\$136.83	\$138.98	\$137.33	\$137.35
Mar-21	52,336		\$140.45	\$139.35	\$140.38	\$139.35	\$137.56	\$139.27	\$137.26	\$139.14	\$137.32	\$137.35
Apr-21	52,336		\$140.65	\$139.55	\$140.58	\$139.54	\$138.70	\$139.42	\$138.70	\$139.30	\$137.32	\$137.34
May-21	52,336		\$140.85	\$139.75	\$140.76	\$139.73	\$139.80	\$139.58	\$139.77	\$139.45	\$137.32	\$137.34
Jun-21	52,336		\$141.06	\$139.95	\$140.96	\$139.92	\$135.78	\$139.73	\$135.85	\$139.61	\$137.31	\$137.33
Jul-21	52,336		\$141.26	\$140.15	\$141.14	\$140.11	\$139.97	\$139.88	\$140.15	\$139.76	\$137.31	\$137.33
Aug-21	52,336		\$141.46	\$140.35	\$141.34	\$140.29	\$128.36	\$140.02	\$128.97	\$139.92	\$137.30	\$137.33
Sep-21	52,336		\$141.67	\$140.56	\$141.53	\$140.48	\$139.59	\$140.18	\$139.83	\$140.07	\$137.30	\$137.32
Oct-21	52,336		\$141.87	\$140.76	\$141.72	\$140.67	\$145.80	\$140.34	\$145.44	\$140.23	\$137.30	\$137.32
Nov-21	52,336		\$142.08	\$140.96	\$141.91	\$140.86	\$151.70	\$140.50	\$151.15	\$140.38	\$137.29	\$137.31
Dec-21	52,336		\$142.28	\$141.16	\$142.10	\$141.05	\$151.48	\$140.67	\$150.57	\$140.54	\$137.29	\$137.31
Utilization Trend			1.74%		1.66%		1.22%		1.16%		0.18%	
RMSE (root mean square error)			6.56		6.54		5.63		5.56		6.91	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Professional - 24 Month

Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-17	54,513	\$144.00	\$136.43		\$136.52735							
Dec-17	54,478	\$136.47	\$136.37		\$136.47						\$144.00	
Jan-18	52,507	\$137.07	\$136.32		\$136.42						\$140.66	
Feb-18	52,433	\$137.20	\$136.26		\$136.36						\$139.07	
Mar-18	52,332	\$131.45	\$136.21		\$136.31						\$138.23	
Apr-18	52,560	\$134.77	\$136.15		\$136.26						\$135.22	
May-18	52,733	\$136.62	\$136.09		\$136.21						\$135.01	
Jun-18	52,720	\$129.44	\$136.04		\$136.15						\$135.72	
Jul-18	53,446	\$130.33	\$135.98		\$136.10						\$132.93	
Aug-18	53,468	\$122.69	\$135.92		\$136.04						\$131.77	
Sep-18	53,278	\$140.30	\$135.86		\$135.99						\$127.73	
Oct-18	53,566	\$139.38	\$135.81	\$136.12	\$135.93	\$136.23					\$133.29	
Nov-18	53,900	\$140.20	\$135.75	\$136.06	\$135.88	\$136.18	\$144.00		\$144.00		\$135.98	\$135.80
Dec-18	53,803	\$150.72	\$135.69	\$136.00	\$135.83	\$136.12	\$136.45				\$137.84	\$135.27
Jan-19	54,540	\$136.52	\$135.64	\$135.95	\$135.77	\$136.07	\$137.12		\$137.14		\$143.55	\$135.54
Feb-19	54,495	\$135.15	\$135.58	\$135.89	\$135.72	\$136.01	\$137.28		\$137.31		\$140.43	\$135.66
Mar-19	54,459	\$140.46	\$135.53	\$135.83	\$135.67	\$135.96	\$131.54		\$131.58		\$138.09	\$135.66
Apr-19	54,100	\$134.38	\$135.47	\$135.78	\$135.61	\$135.91	\$134.93		\$135.00		\$139.13	\$135.99
May-19	53,986	\$134.84	\$135.41	\$135.72	\$135.56	\$135.85	\$136.83		\$136.92		\$137.02	\$136.15
Jun-19	53,631	\$134.94	\$135.36	\$135.67	\$135.50	\$135.80	\$129.67		\$129.79		\$136.05	\$136.18
Jul-19	52,969	\$135.34	\$135.30	\$135.61	\$135.45	\$135.75	\$130.64		\$130.78		\$135.55	\$136.40
Aug-19	52,672	\$125.85	\$135.24	\$135.55	\$135.40	\$135.69	\$123.05		\$123.25		\$135.45	\$136.70
Sep-19	52,492	\$129.76	\$135.19	\$135.50	\$135.34	\$135.64	\$140.80		\$140.98		\$131.18	\$136.99
Oct-19	52,336	\$143.89	\$135.13	\$135.44	\$135.29	\$135.59	\$139.89	\$135.19	\$140.07	\$135.28	\$130.54	\$136.78
Nov-19	52,336		\$135.07	\$135.39	\$135.23	\$135.53	\$140.90	\$134.92	\$141.01	\$135.01	\$136.45	\$136.82
Dec-19	52,336		\$135.02	\$135.33	\$135.18	\$135.48	\$151.03	\$136.11	\$151.55	\$136.25	\$136.44	\$136.70
Jan-20	52,336		\$134.96	\$135.27	\$135.12	\$135.42	\$137.18	\$136.11	\$137.40	\$136.26	\$136.43	\$136.09
Feb-20	52,336		\$134.90	\$135.22	\$135.07	\$135.37	\$135.89	\$135.99	\$136.07	\$136.16	\$136.42	\$135.75
Mar-20	52,336		\$134.85	\$135.16	\$135.02	\$135.32	\$140.94	\$136.78	\$141.38	\$136.98	\$136.42	\$135.60
Apr-20	52,336		\$134.79	\$135.10	\$134.96	\$135.26	\$135.09	\$136.80	\$135.32	\$137.02	\$136.41	\$135.37
May-20	52,336		\$134.74	\$135.05	\$134.91	\$135.21	\$135.61	\$136.70	\$135.80	\$136.92	\$136.40	\$135.31
Jun-20	52,336		\$134.68	\$134.99	\$134.85	\$135.15	\$135.53	\$137.20	\$135.90	\$137.45	\$136.39	\$135.34
Jul-20	52,336		\$134.62	\$134.93	\$134.80	\$135.10	\$135.93	\$137.65	\$136.27	\$137.91	\$136.39	\$135.41
Aug-20	52,336		\$134.57	\$134.88	\$134.75	\$135.04	\$126.42	\$137.93	\$126.76	\$138.21	\$136.38	\$135.49
Sep-20	52,336		\$134.51	\$134.82	\$134.69	\$134.99	\$130.73	\$137.10	\$130.70	\$137.35	\$136.37	\$135.92
Oct-20	52,336		\$134.45	\$134.76	\$134.64	\$134.94	\$144.53	\$137.48	\$144.81	\$137.75	\$136.37	\$136.41
Nov-20	52,336		\$134.40	\$134.71	\$134.58	\$134.88	\$141.63	\$137.54	\$141.93	\$137.82	\$136.36	\$136.40
Dec-20	52,336		\$134.34	\$134.65	\$134.53	\$134.83	\$151.81	\$137.61	\$152.47	\$137.90	\$136.35	\$136.39
Jan-21	52,336		\$134.28	\$134.59	\$134.47	\$134.77	\$137.90	\$137.67	\$138.32	\$137.98	\$136.34	\$136.38
Feb-21	52,336		\$134.23	\$134.54	\$134.42	\$134.72	\$136.59	\$137.73	\$137.00	\$138.06	\$136.34	\$136.38
Mar-21	52,336		\$134.18	\$134.48	\$134.37	\$134.66	\$141.67	\$137.79	\$142.30	\$138.13	\$136.33	\$136.37
Apr-21	52,336		\$134.12	\$134.43	\$134.31	\$134.61	\$135.79	\$137.85	\$136.25	\$138.21	\$136.32	\$136.36
May-21	52,336		\$134.06	\$134.37	\$134.26	\$134.56	\$136.31	\$137.90	\$136.72	\$138.29	\$136.31	\$136.35
Jun-21	52,336		\$134.01	\$134.31	\$134.21	\$134.50	\$136.23	\$137.96	\$136.82	\$138.36	\$136.31	\$136.35
Jul-21	52,336		\$133.95	\$134.26	\$134.15	\$134.45	\$136.63	\$138.02	\$137.20	\$138.44	\$136.30	\$136.34
Aug-21	52,336		\$133.89	\$134.20	\$134.10	\$134.39	\$127.08	\$138.08	\$127.68	\$138.52	\$136.29	\$136.33
Sep-21	52,336		\$133.84	\$134.15	\$134.04	\$134.34	\$131.41	\$138.13	\$131.62	\$138.59	\$136.28	\$136.33
Oct-21	52,336		\$133.78	\$134.09	\$133.99	\$134.29	\$145.28	\$138.19	\$145.73	\$138.67	\$136.28	\$136.32
Nov-21	52,336		\$133.73	\$134.03	\$133.93	\$134.23	\$142.37	\$138.26	\$142.86	\$138.75	\$136.27	\$136.31
Dec-21	52,336		\$133.67	\$133.98	\$133.88	\$134.18	\$152.60	\$138.32	\$153.40	\$138.83	\$136.26	\$136.30
Utilization Trend			-0.50%		-0.48%		1.06%		1.20%		-0.16%	
RMSE (root mean square error)			6.24		6.21		6.47		6.47		6.64	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Total - 48 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-15	57,692	\$455.41	\$398.74		\$399.35							
Dec-15	57,890	\$398.88	\$399.35		\$399.98						\$455.41	
Jan-16	52,944	\$409.21	\$399.99		\$400.64						\$430.62	
Feb-16	52,655	\$411.11	\$400.62		\$401.29						\$421.20	
Mar-16	52,655	\$383.78	\$401.21		\$401.90						\$416.74	
Apr-16	52,628	\$392.17	\$401.85		\$402.55						\$402.25	
May-16	52,040	\$381.51	\$402.46		\$403.19						\$397.77	
Jun-16	52,000	\$389.46	\$403.10		\$403.84						\$390.58	
Jul-16	51,849	\$389.53	\$403.72		\$404.47						\$390.02	
Aug-16	51,743	\$370.95	\$404.36		\$405.12						\$389.74	
Sep-16	51,752	\$431.61	\$405.00		\$405.78						\$381.43	
Oct-16	51,944	\$417.55	\$405.62	\$402.10	\$406.41	\$402.81					\$403.37	
Nov-16	51,926	\$453.23	\$406.26	\$402.75	\$407.06	\$403.47	\$455.41		\$455.41		\$409.54	
Dec-16	51,220	\$438.36	\$406.88	\$403.40	\$407.69	\$404.14	\$398.83			\$398.81	\$428.66	
Jan-17	54,466	\$408.56	\$407.53	\$404.05	\$408.35	\$404.80	\$410.04		\$410.24		\$432.89	
Feb-17	54,376	\$375.98	\$408.17	\$404.70	\$409.00	\$405.46	\$412.34		\$412.54		\$422.19	
Mar-17	54,286	\$384.78	\$408.76	\$405.34	\$409.59	\$406.12	\$384.56		\$384.61		\$401.89	
Apr-17	54,315	\$390.45	\$409.41	\$405.98	\$410.24	\$406.77	\$392.98		\$392.99		\$394.33	
May-17	54,511	\$402.95	\$410.03	\$406.61	\$410.88	\$407.41	\$382.26		\$382.25		\$392.57	
Jun-17	54,564	\$390.25	\$410.68	\$407.25	\$411.53	\$408.06	\$390.68		\$390.75		\$397.06	
Jul-17	54,781	\$442.08	\$411.31	\$407.88	\$412.16	\$408.70	\$390.95		\$391.01		\$394.02	
Aug-17	54,843	\$354.99	\$411.96	\$408.51	\$412.81	\$409.34	\$373.59		\$374.07		\$415.04	
Sep-17	54,384	\$392.58	\$412.62	\$409.14	\$413.47	\$409.97	\$435.06		\$435.02		\$388.66	
Oct-17	54,362	\$425.75	\$413.25	\$409.77	\$414.10	\$410.60	\$420.58	\$403.74	\$420.35	\$403.80	\$390.31	\$405.47
Nov-17	54,513	\$432.41	\$413.90	\$410.39	\$414.75	\$411.23	\$458.10	\$404.17	\$457.55	\$404.19	\$405.79	\$405.17
Dec-17	54,478	\$453.39	\$414.54	\$411.01	\$415.38	\$411.86	\$418.14	\$405.75	\$417.62	\$405.73	\$417.42	\$404.35
Jan-18	52,507	\$434.66	\$415.19	\$411.64	\$416.04	\$412.49	\$412.23	\$405.91	\$411.84	\$405.84	\$433.16	\$404.29
Feb-18	52,433	\$431.74	\$415.85	\$412.27	\$416.69	\$413.12	\$400.44	\$404.93	\$400.30	\$404.83	\$433.80	\$405.17
Mar-18	52,332	\$390.58	\$416.45	\$412.90	\$417.28	\$413.75	\$389.27	\$405.38	\$389.51	\$405.29	\$432.87	\$407.68
Apr-18	52,560	\$430.08	\$417.10	\$413.54	\$417.93	\$414.38	\$397.54	\$405.78	\$397.74	\$405.71	\$414.30	\$409.34
May-18	52,733	\$408.61	\$417.74	\$414.18	\$418.57	\$415.02	\$398.06	\$407.14	\$398.49	\$407.10	\$421.18	\$411.73
Jun-18	52,720	\$396.32	\$418.41	\$414.82	\$419.22	\$415.66	\$398.79	\$407.85	\$399.33	\$407.86	\$415.64	\$413.30
Jul-18	53,446	\$396.55	\$419.05	\$415.48	\$419.85	\$416.31	\$421.95	\$410.47	\$421.99	\$410.47	\$407.13	\$414.43
Aug-18	53,468	\$388.75	\$419.71	\$416.13	\$420.50	\$416.96	\$374.19	\$410.60	\$375.24	\$410.65	\$402.44	\$413.38
Sep-18	53,278	\$449.57	\$420.38	\$416.78	\$421.16	\$417.61	\$428.10	\$409.98	\$427.78	\$410.00	\$396.39	\$414.06
Oct-18	53,566	\$424.29	\$421.02	\$417.44	\$421.79	\$418.26	\$435.60	\$411.22	\$435.28	\$411.24	\$419.65	\$416.56
Nov-18	53,900	\$423.04	\$421.69	\$418.10	\$422.44	\$418.91	\$462.26	\$411.53	\$460.91	\$411.48	\$421.65	\$417.91
Dec-18	53,803	\$474.29	\$422.33	\$418.76	\$423.08	\$419.57	\$447.97	\$414.04	\$446.95	\$413.95	\$422.23	\$418.31
Jan-19	54,540	\$434.39	\$423.00	\$419.42	\$423.73	\$420.21	\$437.25	\$416.17	\$436.70	\$416.07	\$445.03	\$419.37
Feb-19	54,495	\$430.55	\$423.67	\$420.07	\$424.38	\$420.86	\$429.20	\$418.57	\$429.00	\$418.46	\$440.36	\$419.98
Mar-19	54,459	\$443.09	\$424.28	\$420.72	\$424.97	\$421.50	\$404.73	\$419.78	\$405.58	\$419.72	\$436.04	\$420.29
Apr-19	54,100	\$406.40	\$424.95	\$421.37	\$425.62	\$422.13	\$427.88	\$422.28	\$428.04	\$422.22	\$439.12	\$422.36
May-19	53,986	\$418.89	\$425.60	\$422.02	\$426.26	\$422.77	\$418.48	\$423.94	\$418.91	\$423.88	\$424.75	\$422.66
Jun-19	53,631	\$434.07	\$426.27	\$422.67	\$426.91	\$423.40	\$413.54	\$425.12	\$414.19	\$425.07	\$422.15	\$423.19
Jul-19	52,969	\$439.46	\$426.93	\$423.32	\$427.54	\$424.03	\$428.30	\$425.65	\$428.26	\$425.59	\$427.35	\$424.85
Aug-19	52,672	\$397.63	\$427.60	\$423.97	\$428.20	\$424.67	\$396.77	\$427.55	\$398.85	\$427.58	\$432.63	\$427.35
Sep-19	52,492	\$397.55	\$428.28	\$424.62	\$428.85	\$425.30	\$456.34	\$429.85	\$455.11	\$429.81	\$417.26	\$429.08
Oct-19	52,336	\$464.58	\$428.94	\$425.27	\$429.48	\$425.93	\$448.78	\$430.91	\$447.44	\$430.78	\$408.58	\$428.20
Nov-19	52,336		\$429.62	\$425.92	\$430.13	\$426.56	\$464.78	\$431.04	\$462.38	\$430.83	\$433.09	\$429.15
Dec-19	52,336		\$430.28	\$426.58	\$430.77	\$427.20	\$478.92	\$433.53	\$476.25	\$433.19	\$433.07	\$430.05
Jan-20	52,336		\$430.96	\$427.25	\$431.42	\$427.84	\$454.93	\$434.97	\$453.42	\$434.55	\$433.05	\$429.02
Feb-20	52,336		\$431.64	\$427.91	\$432.07	\$428.49	\$448.47	\$436.57	\$447.43	\$436.08	\$433.03	\$428.38
Mar-20	52,336		\$432.28	\$428.59	\$432.68	\$429.14	\$438.92	\$439.50	\$438.84	\$438.93	\$433.01	\$428.10
Apr-20	52,336		\$432.96	\$429.26	\$433.34	\$429.79	\$436.47	\$440.25	\$435.97	\$439.62	\$432.99	\$427.56
May-20	52,336		\$433.63	\$429.94	\$433.97	\$430.43	\$436.21	\$441.78	\$435.95	\$441.09	\$432.97	\$428.25
Jun-20	52,336		\$434.31	\$430.61	\$434.62	\$431.08	\$439.57	\$444.00	\$439.30	\$443.23	\$432.95	\$429.16
Jul-20	52,336		\$434.98	\$431.29	\$435.25	\$431.73	\$450.28	\$445.85	\$449.11	\$444.98	\$432.93	\$429.63
Aug-20	52,336		\$435.67	\$431.96	\$435.91	\$432.37	\$412.47	\$447.18	\$413.91	\$446.26	\$432.91	\$429.65
Sep-20	52,336		\$436.36	\$432.63	\$436.56	\$433.02	\$448.20	\$446.50	\$446.51	\$445.54	\$432.89	\$430.96
Oct-20	52,336		\$437.03	\$433.31	\$437.19	\$433.66	\$473.14	\$448.53	\$470.71	\$447.48	\$432.87	\$432.98
Nov-20	52,336		\$437.72	\$433.98	\$437.85	\$434.30	\$482.74	\$450.03	\$478.32	\$448.81	\$432.85	\$432.96
Dec-20	52,336		\$438.39	\$434.66	\$438.48	\$434.95	\$497.38	\$451.57	\$492.20	\$450.14	\$432.83	\$432.94
Jan-21	52,336		\$439.08	\$435.34	\$439.13	\$435.59	\$472.40	\$453.02	\$469.36	\$451.47	\$432.81	\$432.92
Feb-21	52,336		\$439.78	\$436.02	\$439.78	\$436.23	\$465.64	\$454.45	\$463.37	\$452.80	\$432.79	\$432.90
Mar-21	52,336		\$440.41	\$436.69	\$440.37	\$436.87	\$455.67	\$455.85	\$454.78	\$454.12	\$432.77	\$432.88
Apr-21	52,336		\$441.11	\$437.37	\$441.03	\$437.51	\$453.08	\$457.23	\$451.91	\$455.45	\$432.75	\$432.86
May-21	52,336		\$441.78	\$438.05	\$441.66	\$438.15	\$452.76	\$458.61	\$451.90	\$456.78	\$432.73	\$432.84
Jun-21	52,336		\$442.48	\$438.73	\$442.31	\$438.79	\$456.19	\$460.00	\$455.24	\$458.11	\$432.71	\$432.82
Jul-21	52,336		\$443.16	\$439.41	\$442.94	\$439.43	\$467.25	\$461.41	\$465.05	\$459.44	\$432.68	\$432.80
Aug-21	52,336		\$443.86	\$440.10	\$443.60	\$440.08	\$472.97	\$462.70	\$429.85	\$460.77	\$432.66	\$432.78
Sep-21	52,336		\$444.56	\$440.78	\$444.25	\$440.72	\$464.99	\$464.10	\$462.45	\$462.10	\$432.64	\$432.76
Oct-21	52,336		\$445.25	\$441.46	\$444.88	\$441.36	\$490.81	\$465.57	\$486.65	\$463.42	\$432.62	\$432.74
Nov-21	52,336		\$445.95	\$442.15	\$445.54	\$442.00	\$500.71	\$467.07	\$494.27	\$464.75	\$432.60	\$432.72
Dec-21	52,336		\$446.63	\$442.84	\$446.17	\$442.64	\$515.83	\$468.61	\$508.14	\$466.08	\$432.58	\$432.70
Utilization Trend			1.89%		1.79%		3.95%		3.70%		0.48%	
RMSE (root mean square error)			24.07		23.92		25.03		24.91		28.25	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Total - 36 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-16	51,926	\$453.23	\$405.10		\$406.01							
Dec-16	51,220	\$438.36	\$405.79		\$406.70						\$453.23	
Jan-17	54,466	\$408.56	\$406.50		\$407.42						\$447.07	
Feb-17	54,376	\$375.98	\$407.22		\$408.14						\$431.10	
Mar-17	54,286	\$384.78	\$407.87		\$408.79						\$408.23	
Apr-17	54,315	\$390.45	\$408.58		\$409.51						\$398.46	
May-17	54,511	\$402.95	\$409.28		\$410.21						\$395.09	
Jun-17	54,564	\$390.25	\$410.00		\$410.93						\$398.29	
Jul-17	54,781	\$442.08	\$410.70		\$411.63						\$394.90	
Aug-17	54,843	\$354.99	\$411.42		\$412.35						\$414.40	
Sep-17	54,384	\$392.58	\$412.15		\$413.07						\$389.74	
Oct-17	54,362	\$425.75	\$412.85	\$408.99	\$413.77	\$409.91					\$390.85	
Nov-17	54,513	\$432.41	\$413.58	\$409.68	\$414.49	\$410.61	\$453.23		\$453.23		\$405.26	\$410.34
Dec-17	54,478	\$453.39	\$414.28	\$410.37	\$415.18	\$411.29	\$437.83		\$437.65		\$416.46	\$407.49
Jan-18	52,507	\$434.66	\$415.01	\$411.07	\$415.90	\$411.99	\$408.25		\$408.11		\$431.73	\$406.13
Feb-18	52,433	\$431.74	\$415.74	\$411.77	\$416.62	\$412.68	\$376.29		\$376.37		\$432.93	\$406.21
Mar-18	52,332	\$390.58	\$416.40	\$412.47	\$417.27	\$413.38	\$386.82		\$387.33		\$432.42	\$408.15
Apr-18	52,560	\$430.08	\$417.13	\$413.17	\$417.99	\$414.08	\$393.44		\$394.12		\$415.05	\$409.53
May-18	52,733	\$408.61	\$417.85	\$413.89	\$418.69	\$414.78	\$407.93		\$408.90		\$421.25	\$411.71
Jun-18	52,720	\$396.32	\$418.58	\$414.60	\$419.41	\$415.49	\$396.34		\$397.72		\$415.98	\$413.20
Jul-18	53,446	\$396.55	\$419.29	\$415.32	\$420.11	\$416.21	\$450.41		\$451.03		\$407.79	\$414.31
Aug-18	53,468	\$388.75	\$420.03	\$416.05	\$420.83	\$416.92	\$361.68		\$363.60		\$403.09	\$413.37
Sep-18	53,278	\$449.57	\$420.77	\$416.78	\$421.55	\$417.64	\$401.52		\$402.83		\$397.10	\$414.02
Oct-18	53,566	\$424.29	\$421.49	\$417.51	\$422.24	\$418.35	\$437.99	\$409.57	\$438.71	\$410.22	\$418.79	\$416.39
Nov-18	53,900	\$423.04	\$422.23	\$418.24	\$422.96	\$419.07	\$459.38	\$410.05	\$459.72	\$410.73	\$421.04	\$417.74
Dec-18	53,803	\$474.29	\$422.95	\$418.98	\$423.66	\$419.79	\$459.26	\$411.83	\$458.71	\$412.48	\$421.84	\$418.20
Jan-19	54,540	\$434.39	\$423.69	\$419.71	\$424.38	\$420.51	\$434.36	\$414.05	\$434.51	\$414.72	\$443.55	\$419.25
Feb-19	54,495	\$430.55	\$424.44	\$420.44	\$425.10	\$421.21	\$413.43	\$417.08	\$413.89	\$417.79	\$439.74	\$419.87
Mar-19	54,459	\$443.09	\$425.11	\$421.16	\$425.75	\$421.92	\$403.50	\$418.39	\$405.19	\$419.20	\$435.92	\$420.21
Apr-19	54,100	\$406.40	\$425.86	\$421.88	\$426.47	\$422.62	\$425.16	\$421.00	\$425.77	\$421.80	\$438.88	\$422.20
May-19	53,986	\$418.89	\$426.59	\$422.61	\$427.17	\$423.32	\$425.21	\$422.42	\$426.16	\$423.21	\$425.40	\$422.54
Jun-19	53,631	\$434.07	\$427.34	\$423.33	\$427.89	\$424.02	\$413.02	\$423.76	\$414.53	\$424.57	\$422.68	\$423.09
Jul-19	52,969	\$439.46	\$428.07	\$424.05	\$428.59	\$424.72	\$448.49	\$423.59	\$448.98	\$424.39	\$427.37	\$424.70
Aug-19	52,672	\$397.63	\$428.82	\$424.77	\$429.31	\$425.42	\$390.08	\$425.98	\$392.99	\$426.86	\$432.36	\$427.12
Sep-19	52,492	\$397.55	\$429.58	\$425.49	\$430.03	\$426.11	\$440.66	\$429.20	\$440.51	\$429.96	\$417.94	\$428.85
Oct-19	52,336	\$464.58	\$430.31	\$426.22	\$430.72	\$426.81	\$452.01	\$430.32	\$451.37	\$430.97	\$409.46	\$428.11
Nov-19	52,336		\$431.07	\$426.95	\$431.44	\$427.51	\$465.61	\$430.76	\$464.59	\$431.30	\$432.26	\$429.05
Dec-19	52,336		\$431.80	\$427.68	\$432.14	\$428.21	\$487.31	\$432.99	\$484.09	\$433.31	\$432.24	\$429.91
Jan-20	52,336		\$432.56	\$428.42	\$432.86	\$428.92	\$455.10	\$434.68	\$453.92	\$434.90	\$432.22	\$428.94
Feb-20	52,336		\$433.32	\$429.17	\$433.58	\$429.63	\$440.30	\$436.97	\$439.69	\$437.09	\$432.20	\$428.28
Mar-20	52,336		\$434.03	\$429.92	\$434.25	\$430.34	\$438.71	\$439.98	\$438.47	\$439.94	\$432.18	\$427.94
Apr-20	52,336		\$434.80	\$430.67	\$434.97	\$431.06	\$436.64	\$440.98	\$436.47	\$440.87	\$432.16	\$427.36
May-20	52,336		\$435.54	\$431.42	\$435.67	\$431.78	\$441.80	\$442.39	\$441.46	\$442.18	\$432.14	\$427.92
Jun-20	52,336		\$436.31	\$432.18	\$436.39	\$432.49	\$440.07	\$444.71	\$439.72	\$444.33	\$432.12	\$428.72
Jul-20	52,336		\$437.05	\$432.93	\$437.09	\$433.20	\$464.17	\$446.01	\$462.53	\$445.45	\$432.10	\$429.11
Aug-20	52,336		\$437.82	\$433.68	\$437.81	\$433.91	\$409.79	\$447.68	\$411.66	\$447.04	\$432.08	\$429.09
Sep-20	52,336		\$438.59	\$434.43	\$438.53	\$434.62	\$441.53	\$447.75	\$441.04	\$447.08	\$432.06	\$430.27
Oct-20	52,336		\$439.34	\$435.18	\$439.23	\$435.33	\$476.64	\$449.81	\$473.79	\$448.95	\$432.04	\$432.15
Nov-20	52,336		\$440.11	\$435.94	\$439.95	\$436.04	\$485.47	\$451.46	\$481.84	\$450.39	\$432.02	\$432.13
Dec-20	52,336		\$440.86	\$436.69	\$440.64	\$436.75	\$508.02	\$453.19	\$501.35	\$451.83	\$432.00	\$432.11
Jan-21	52,336		\$441.64	\$437.45	\$441.36	\$437.46	\$474.37	\$454.79	\$471.17	\$453.27	\$431.98	\$432.09
Feb-21	52,336		\$442.41	\$438.21	\$442.08	\$438.16	\$458.88	\$456.34	\$456.94	\$454.70	\$431.96	\$432.07
Mar-21	52,336		\$443.12	\$438.96	\$442.73	\$438.87	\$457.16	\$457.88	\$455.72	\$456.14	\$431.94	\$432.05
Apr-21	52,336		\$443.90	\$439.72	\$443.45	\$439.58	\$454.93	\$459.40	\$453.72	\$457.58	\$431.92	\$432.03
May-21	52,336		\$444.65	\$440.48	\$444.15	\$440.28	\$460.25	\$460.94	\$458.71	\$459.02	\$431.90	\$432.01
Jun-21	52,336		\$445.44	\$441.24	\$444.87	\$440.99	\$458.38	\$462.47	\$456.98	\$460.45	\$431.88	\$431.99
Jul-21	52,336		\$446.19	\$442.01	\$445.57	\$441.70	\$483.42	\$464.07	\$479.78	\$461.89	\$431.86	\$431.97
Aug-21	52,336		\$446.98	\$442.77	\$446.29	\$442.40	\$426.73	\$465.48	\$428.91	\$463.33	\$431.84	\$431.95
Sep-21	52,336		\$447.77	\$443.53	\$447.01	\$443.11	\$459.71	\$467.00	\$458.29	\$464.77	\$431.83	\$431.93
Oct-21	52,336		\$448.53	\$444.30	\$447.70	\$443.82	\$496.20	\$468.63	\$491.05	\$466.21	\$431.81	\$431.91
Nov-21	52,336		\$449.32	\$445.07	\$448.42	\$444.52	\$505.33	\$470.28	\$499.09	\$467.64	\$431.79	\$431.89
Dec-21	52,336		\$450.08	\$445.84	\$449.12	\$445.23	\$528.73	\$472.01	\$518.60	\$469.08	\$431.77	\$431.87
Utilization Trend			2.10%		1.97%		4.36%		3.99%		0.40%	
RMSE (root mean square error)			23.98		23.85		27.64		27.38		28.9	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Total - 24 Month												
Month	Membership		Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-17	54,513	\$432.41	\$422.32		422.81362							
Dec-17	54,478	\$453.39	\$422.50		\$423.00						\$432.41	
Jan-18	52,507	\$434.66	\$422.69		\$423.20						\$433.11	
Feb-18	52,433	\$431.74	\$422.87		\$423.40						\$433.17	
Mar-18	52,332	\$390.58	\$423.04		\$423.58						\$433.12	
Apr-18	52,560	\$430.08	\$423.23		\$423.78						\$431.69	
May-18	52,733	\$408.61	\$423.41		\$423.97						\$431.63	
Jun-18	52,720	\$396.32	\$423.59		\$424.16						\$430.86	
Jul-18	53,446	\$396.55	\$423.77		\$424.36						\$429.70	
Aug-18	53,468	\$388.75	\$423.96		\$424.55						\$428.58	
Sep-18	53,278	\$449.57	\$424.15		\$424.75						\$427.24	
Oct-18	53,566	\$424.29	\$424.33	\$423.32	\$424.94	\$423.87					\$427.98	
Nov-18	53,900	\$423.04	\$424.51	\$423.51	\$425.14	\$424.07	\$432.41		\$432.41		\$427.85	\$430.60
Dec-18	53,803	\$474.29	\$424.70	\$423.69	\$425.33	\$424.27	\$453.17		\$453.10		\$427.69	\$430.20
Jan-19	54,540	\$434.39	\$424.88	\$423.88	\$425.53	\$424.46	\$434.80		\$434.89		\$429.25	\$429.88
Feb-19	54,495	\$430.55	\$425.07	\$424.06	\$425.72	\$424.66	\$431.99		\$432.13		\$429.42	\$429.57
Mar-19	54,459	\$443.09	\$425.24	\$424.24	\$425.90	\$424.85	\$390.89		\$391.10		\$429.45	\$429.27
Apr-19	54,100	\$406.40	\$425.43	\$424.43	\$426.10	\$425.04	\$431.84		\$432.39		\$429.91	\$429.13
May-19	53,986	\$418.89	\$425.61	\$424.61	\$426.29	\$425.24	\$410.46		\$411.07		\$429.12	\$428.92
Jun-19	53,631	\$434.07	\$425.79	\$424.79	\$426.49	\$425.43	\$398.73		\$399.58		\$428.77	\$428.75
Jul-19	52,969	\$439.46	\$425.97	\$424.97	\$426.68	\$425.62	\$400.29		\$401.57		\$428.94	\$428.69
Aug-19	52,672	\$397.63	\$426.16	\$425.15	\$426.88	\$425.81	\$394.23		\$396.19		\$429.29	\$428.75
Sep-19	52,492	\$397.55	\$426.35	\$425.33	\$427.07	\$426.00	\$457.56		\$458.87		\$428.23	\$428.83
Oct-19	52,336	\$464.58	\$426.53	\$425.51	\$427.27	\$426.19	\$432.05	\$422.35	\$433.50	\$423.04	\$427.19	\$428.77
Nov-19	52,336		\$426.72	\$425.70	\$427.46	\$426.38	\$432.51	\$422.34	\$434.27	\$423.17	\$428.44	\$428.82
Dec-19	52,336		\$426.90	\$425.88	\$427.65	\$426.58	\$486.13	\$424.96	\$486.67	\$425.85	\$428.44	\$428.88
Jan-20	52,336		\$427.09	\$426.06	\$427.85	\$426.77	\$446.40	\$425.88	\$447.97	\$426.89	\$428.44	\$428.81
Feb-20	52,336		\$427.28	\$426.25	\$428.05	\$426.97	\$443.62	\$426.81	\$445.35	\$427.96	\$428.43	\$428.73
Mar-20	52,336		\$427.45	\$426.43	\$428.23	\$427.16	\$456.97	\$432.39	\$458.23	\$433.63	\$428.43	\$428.64
Apr-20	52,336		\$427.64	\$426.62	\$428.43	\$427.36	\$419.94	\$431.41	\$422.42	\$432.80	\$428.42	\$428.51
May-20	52,336		\$427.82	\$426.81	\$428.62	\$427.55	\$433.46	\$433.37	\$435.56	\$434.89	\$428.42	\$428.45
Jun-20	52,336		\$428.01	\$426.99	\$428.82	\$427.75	\$449.36	\$437.65	\$450.86	\$439.23	\$428.42	\$428.43
Jul-20	52,336		\$428.19	\$427.18	\$429.01	\$427.95	\$454.64	\$442.22	\$455.79	\$443.78	\$428.41	\$428.38
Aug-20	52,336		\$428.38	\$427.36	\$429.21	\$428.14	\$411.09	\$443.65	\$413.52	\$445.25	\$428.41	\$428.31
Sep-20	52,336		\$428.57	\$427.55	\$429.41	\$428.33	\$411.40	\$439.80	\$413.99	\$441.51	\$428.40	\$428.32
Oct-20	52,336		\$428.75	\$427.73	\$429.60	\$428.53	\$480.60	\$443.84	\$480.93	\$445.46	\$428.40	\$428.42
Nov-20	52,336		\$428.94	\$427.92	\$429.79	\$428.72	\$447.42	\$445.09	\$450.65	\$446.83	\$428.40	\$428.42
Dec-20	52,336		\$429.12	\$428.10	\$429.99	\$428.92	\$502.84	\$446.48	\$503.05	\$448.19	\$428.39	\$428.41
Jan-21	52,336		\$429.31	\$428.29	\$430.18	\$429.11	\$461.70	\$447.75	\$464.35	\$449.56	\$428.39	\$428.41
Feb-21	52,336		\$429.50	\$428.48	\$430.38	\$429.31	\$458.78	\$449.02	\$461.73	\$450.92	\$428.38	\$428.41
Mar-21	52,336		\$429.67	\$428.66	\$430.56	\$429.50	\$472.54	\$450.31	\$474.61	\$452.29	\$428.38	\$428.40
Apr-21	52,336		\$429.86	\$428.85	\$430.76	\$429.69	\$434.21	\$451.50	\$438.80	\$453.65	\$428.38	\$428.40
May-21	52,336		\$430.04	\$429.03	\$430.95	\$429.89	\$448.15	\$452.73	\$451.94	\$455.02	\$428.37	\$428.39
Jun-21	52,336		\$430.23	\$429.22	\$431.14	\$430.08	\$464.55	\$453.99	\$467.24	\$456.38	\$428.37	\$428.39
Jul-21	52,336		\$430.42	\$429.40	\$431.34	\$430.27	\$469.96	\$455.27	\$472.17	\$457.75	\$428.37	\$428.39
Aug-21	52,336		\$430.61	\$429.59	\$431.53	\$430.47	\$424.90	\$456.42	\$429.90	\$459.11	\$428.36	\$428.38
Sep-21	52,336		\$430.80	\$429.77	\$431.73	\$430.66	\$425.18	\$457.57	\$430.38	\$460.48	\$428.36	\$428.38
Oct-21	52,336		\$430.98	\$429.96	\$431.92	\$430.86	\$496.66	\$458.91	\$497.31	\$461.84	\$428.35	\$428.38
Nov-21	52,336		\$431.17	\$430.14	\$432.12	\$431.05	\$462.33	\$460.15	\$467.03	\$463.21	\$428.35	\$428.37
Dec-21	52,336		\$431.35	\$430.33	\$432.31	\$431.24	\$519.55	\$461.54	\$519.43	\$464.57	\$428.35	\$428.37
Utilization Trend			0.52%		0.55%		4.18%		4.42%		-0.04%	
RMSE (root mean square error)			23.54		23.42		30.87		30.73		24.43	

MEDICAL UTILIZATION TREND CALCULATION

Pure Premium Trend - Pharmaceuticals Processed through the Medical Benefit

Month	MONTHLY DATA			ROLLING 12		
	Members	Contract Adjusted Allowed Charges	Total Specialty PMPM	Members	Contract Adjusted Allowed Charges	Rolling 12 PMPM
Nov-15	57,692	\$ 1,929,844	\$33.45			
Dec-15	57,890	\$ 2,090,382	\$36.11			
Jan-16	52,944	\$ 1,642,972	\$31.03			
Feb-16	52,655	\$ 1,672,271	\$31.76			
Mar-16	52,655	\$ 1,721,443	\$32.69			
Apr-16	52,628	\$ 1,588,606	\$30.19			
May-16	52,040	\$ 1,808,895	\$34.76			
Jun-16	52,000	\$ 2,349,159	\$45.18			
Jul-16	51,849	\$ 1,819,940	\$35.10			
Aug-16	51,743	\$ 1,958,948	\$37.86			
Sep-16	51,752	\$ 2,117,894	\$40.92			
Oct-16	51,944	\$ 2,129,461	\$41.00	637,792	\$ 22,829,813	\$35.80
Nov-16	51,926	\$ 2,301,534	\$44.32	632,026	\$ 23,201,503	\$36.71
Dec-16	51,220	\$ 1,755,070	\$34.27	625,356	\$ 22,866,191	\$36.57
Jan-17	54,466	\$ 1,710,079	\$31.40	626,878	\$ 22,933,299	\$36.58
Feb-17	54,376	\$ 1,819,245	\$33.46	628,599	\$ 23,080,273	\$36.72
Mar-17	54,286	\$ 1,863,763	\$34.33	630,230	\$ 23,222,593	\$36.85
Apr-17	54,315	\$ 1,548,511	\$28.51	631,917	\$ 23,182,497	\$36.69
May-17	54,511	\$ 1,982,522	\$36.37	634,388	\$ 23,356,125	\$36.82
Jun-17	54,564	\$ 1,917,788	\$35.15	636,952	\$ 22,924,755	\$35.99
Jul-17	54,781	\$ 1,837,081	\$33.53	639,884	\$ 22,941,895	\$35.85
Aug-17	54,843	\$ 2,110,904	\$38.49	642,984	\$ 23,093,852	\$35.92
Sep-17	54,384	\$ 2,080,184	\$38.25	645,616	\$ 23,056,142	\$35.71
Oct-17	54,362	\$ 2,325,316	\$42.77	648,034	\$ 23,251,997	\$35.88
Nov-17	54,513	\$ 2,377,450	\$43.61	650,621	\$ 23,327,914	\$35.85
Dec-17	54,478	\$ 2,121,689	\$38.95	653,879	\$ 23,694,533	\$36.24
Jan-18	52,507	\$ 2,669,130	\$50.83	651,920	\$ 24,653,584	\$37.82
Feb-18	52,433	\$ 2,215,209	\$42.25	649,977	\$ 25,049,548	\$38.54
Mar-18	52,332	\$ 2,597,267	\$49.63	648,023	\$ 25,783,052	\$39.79
Apr-18	52,560	\$ 2,113,872	\$40.22	646,268	\$ 26,348,413	\$40.77
May-18	52,733	\$ 2,526,707	\$47.92	644,490	\$ 26,892,598	\$41.73
Jun-18	52,720	\$ 2,018,324	\$38.28	642,646	\$ 26,993,134	\$42.00
Jul-18	53,446	\$ 2,331,045	\$43.61	641,311	\$ 27,487,098	\$42.86
Aug-18	53,468	\$ 2,268,543	\$42.43	639,936	\$ 27,644,737	\$43.20
Sep-18	53,278	\$ 2,009,757	\$37.72	638,830	\$ 27,574,310	\$43.16
Oct-18	53,566	\$ 2,335,503	\$43.60	638,034	\$ 27,584,497	\$43.23
Nov-18	53,900	\$ 2,712,278	\$50.32	637,421	\$ 27,919,325	\$43.80
Dec-18	53,803	\$ 2,378,696	\$44.21	636,746	\$ 28,176,332	\$44.25
Jan-19	54,540	\$ 2,648,395	\$48.56	638,779	\$ 28,155,597	\$44.08
Feb-19	54,495	\$ 2,170,804	\$39.83	640,841	\$ 28,111,193	\$43.87
Mar-19	54,459	\$ 2,484,915	\$45.63	642,968	\$ 27,998,841	\$43.55
Apr-19	54,100	\$ 2,451,851	\$45.32	644,508	\$ 28,336,819	\$43.97
May-19	53,986	\$ 2,911,812	\$53.94	645,761	\$ 28,721,924	\$44.48
Jun-19	53,631	\$ 2,466,694	\$45.99	646,672	\$ 29,170,293	\$45.11
Jul-19	52,969	\$ 2,637,390	\$49.79	646,195	\$ 29,476,638	\$45.62
Aug-19	52,672	\$ 2,668,101	\$50.66	645,399	\$ 29,876,196	\$46.29
Sep-19	52,492	\$ 2,728,500	\$51.98	644,613	\$ 30,594,939	\$47.46
Oct-19	52,336	\$ 2,702,579	\$51.64	643,383	\$ 30,962,014	\$48.12

Pure Premium Trend

11.31%

MEDICAL UTILIZATION TREND CALCULATION
INDUCED UTILIZATION

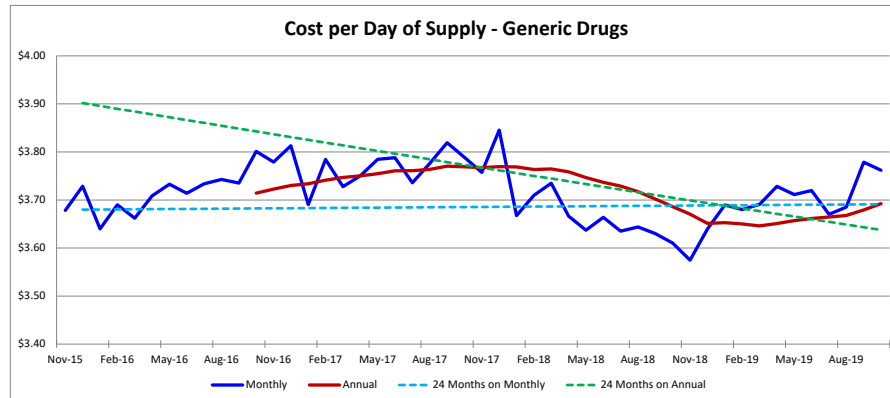
Month	Average Paid to Allowed Ratio	Average Induced Utilization Factor	Normalization Factor for Induced Utilization
Nov-16	0.7295	1.0426	
Dec-16	0.7296	1.0427	
Jan-17	0.7268	1.0415	
Feb-17	0.7260	1.0411	
Mar-17	0.7264	1.0413	
Apr-17	0.7258	1.0410	
May-17	0.7250	1.0406	
Jun-17	0.7249	1.0406	
Jul-17	0.7255	1.0409	
Aug-17	0.7253	1.0408	
Sep-17	0.7245	1.0404	
Oct-17	0.7254	1.0408	
Nov-17	0.7261	1.0411	0.9985
Dec-17	0.7265	1.0413	0.9986
Jan-18	0.7247	1.0405	0.9991
Feb-18	0.7244	1.0403	0.9993
Mar-18	0.7227	1.0396	0.9984
Apr-18	0.7227	1.0396	0.9987
May-18	0.7233	1.0398	0.9993
Jun-18	0.7222	1.0394	0.9989
Jul-18	0.7220	1.0393	0.9985
Aug-18	0.7224	1.0394	0.9987
Sep-18	0.7224	1.0394	0.9991
Oct-18	0.7226	1.0395	0.9988
Nov-18	0.7228	1.0396	0.9986
Dec-18	0.7239	1.0401	0.9989
Jan-19	0.7264	1.0412	1.0007
Feb-19	0.7256	1.0409	1.0005
Mar-19	0.7261	1.0411	1.0015
Apr-19	0.7254	1.0408	1.0011
May-19	0.7253	1.0407	1.0009
Jun-19	0.7271	1.0416	1.0021
Jul-19	0.7271	1.0416	1.0022
Aug-19	0.7271	1.0416	1.0021
Sep-19	0.7284	1.0422	1.0026
Oct-19	0.7302	1.0430	1.0033

PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

GENERIC DRUGS - COST TREND

Incurred Date	MONTHLY DATA				ROLLING 12				EXPONENTIAL FIT	
	Supply	AWP Cost	Cost/ Supply	Monthly Cost Trend	Supply	Adjusted Allowed Charge	Cost/ Supply	Rolling 12 Cost Trend	Monthly Data	Rolling 12 Data
Nov-15	1,409,298	\$5,183,691	\$3.68							
Dec-15	1,591,712	\$5,934,947	\$3.73						\$3.68	\$3.90
Jan-16	1,262,298	\$4,594,783	\$3.64						\$3.68	\$3.90
Feb-16	1,256,328	\$4,635,929	\$3.69						\$3.68	\$3.89
Mar-16	1,373,082	\$5,028,527	\$3.66						\$3.68	\$3.88
Apr-16	1,284,625	\$4,764,149	\$3.71						\$3.68	\$3.88
May-16	1,300,908	\$4,856,287	\$3.73						\$3.68	\$3.87
Jun-16	1,329,245	\$4,936,589	\$3.71						\$3.68	\$3.87
Jul-16	1,281,364	\$4,784,181	\$3.73						\$3.68	\$3.86
Aug-16	1,334,789	\$4,995,914	\$3.74						\$3.68	\$3.85
Sep-16	1,310,879	\$4,896,533	\$3.74						\$3.68	\$3.85
Oct-16	1,338,459	\$5,087,901	\$3.80		16,072,987	\$59,699,430	\$3.71		\$3.68	\$3.84
Nov-16	1,319,442	\$4,986,389	\$3.78	2.7%	15,983,131	\$59,502,128	\$3.72		\$3.68	\$3.84
Dec-16	1,385,091	\$5,281,115	\$3.81	2.3%	15,776,510	\$58,848,297	\$3.73		\$3.68	\$3.83
Jan-17	1,360,948	\$5,022,766	\$3.69	1.4%	15,875,160	\$59,276,280	\$3.73		\$3.68	\$3.83
Feb-17	1,207,752	\$4,570,607	\$3.78	2.6%	15,826,584	\$59,210,958	\$3.74		\$3.68	\$3.82
Mar-17	1,366,361	\$5,093,620	\$3.73	1.8%	15,819,863	\$59,276,052	\$3.75		\$3.68	\$3.81
Apr-17	1,246,700	\$4,675,406	\$3.75	1.1%	15,781,938	\$59,187,310	\$3.75		\$3.68	\$3.81
May-17	1,330,444	\$5,035,245	\$3.78	1.4%	15,811,474	\$59,366,267	\$3.75		\$3.68	\$3.80
Jun-17	1,260,883	\$4,776,244	\$3.79	2.0%	15,743,112	\$59,205,922	\$3.76		\$3.68	\$3.80
Jul-17	1,222,858	\$4,568,241	\$3.74	0.1%	15,684,606	\$58,989,981	\$3.76		\$3.68	\$3.79
Aug-17	1,288,361	\$4,865,383	\$3.78	0.9%	15,638,178	\$58,859,451	\$3.76		\$3.68	\$3.78
Sep-17	1,158,472	\$4,424,365	\$3.82	2.2%	15,485,771	\$58,387,282	\$3.77		\$3.69	\$3.78
Oct-17	1,255,779	\$4,757,527	\$3.79	-0.3%	15,403,091	\$58,056,908	\$3.77		\$3.69	\$3.77
Nov-17	1,225,377	\$4,604,450	\$3.76	-0.6%	15,309,026	\$57,674,969	\$3.77		\$3.69	\$3.77
Dec-17	1,218,854	\$4,687,087	\$3.85	0.9%	15,142,789	\$57,080,941	\$3.77		\$3.69	\$3.76
Jan-18	1,157,515	\$4,245,081	\$3.67	-0.6%	14,939,356	\$56,303,255	\$3.77		\$3.69	\$3.76
Feb-18	1,014,396	\$3,763,326	\$3.71	-2.0%	14,746,000	\$55,495,974	\$3.76		\$3.69	\$3.75
Mar-18	1,106,472	\$4,132,462	\$3.73	0.2%	14,486,111	\$54,534,816	\$3.76		\$3.69	\$3.74
Apr-18	1,056,401	\$3,872,957	\$3.67	-2.2%	14,295,812	\$53,732,367	\$3.76		\$3.69	\$3.74
May-18	1,107,939	\$4,029,696	\$3.64	-3.9%	14,073,307	\$52,726,818	\$3.75		\$3.69	\$3.73
Jun-18	1,023,335	\$3,749,404	\$3.66	-3.3%	13,835,759	\$51,699,978	\$3.74		\$3.69	\$3.73
Jul-18	1,070,647	\$3,891,834	\$3.64	-2.7%	13,683,548	\$51,023,572	\$3.73		\$3.69	\$3.72
Aug-18	1,091,241	\$3,976,164	\$3.64	-3.5%	13,486,428	\$50,134,352	\$3.72		\$3.69	\$3.72
Sep-18	980,218	\$3,558,349	\$3.63	-4.9%	13,308,174	\$49,268,336	\$3.70		\$3.69	\$3.71
Oct-18	1,100,202	\$3,972,050	\$3.61	-4.7%	13,152,597	\$48,482,859	\$3.69		\$3.69	\$3.70
Nov-18	1,055,794	\$3,774,273	\$3.57	-4.9%	12,983,014	\$47,652,682	\$3.67		\$3.69	\$3.70
Dec-18	1,074,026	\$3,908,910	\$3.64	-5.4%	12,838,186	\$46,874,505	\$3.65		\$3.69	\$3.69
Jan-19	1,038,419	\$3,831,537	\$3.69	0.6%	12,719,090	\$46,460,961	\$3.65		\$3.69	\$3.69
Feb-19	927,070	\$3,411,587	\$3.68	-0.8%	12,631,764	\$46,109,222	\$3.65		\$3.69	\$3.68
Mar-19	1,014,495	\$3,744,481	\$3.69	-1.2%	12,539,787	\$45,721,240	\$3.65		\$3.69	\$3.68
Apr-19	1,008,472	\$3,759,893	\$3.73	1.7%	12,491,858	\$45,608,176	\$3.65		\$3.69	\$3.67
May-19	1,001,705	\$3,717,564	\$3.71	2.0%	12,385,624	\$45,296,044	\$3.66		\$3.69	\$3.67
Jun-19	945,839	\$3,518,182	\$3.72	1.5%	12,308,128	\$45,064,822	\$3.66		\$3.69	\$3.66
Jul-19	974,438	\$3,576,397	\$3.67	1.0%	12,211,919	\$44,749,384	\$3.66		\$3.69	\$3.65
Aug-19	930,989	\$3,430,996	\$3.69	1.1%	12,051,667	\$44,204,216	\$3.67		\$3.69	\$3.65
Sep-19	896,811	\$3,388,689	\$3.78	4.1%	11,968,260	\$44,034,557	\$3.68		\$3.69	\$3.64
Oct-19	971,467	\$3,654,616	\$3.76	4.2%	11,839,525	\$43,717,124	\$3.69		\$3.69	\$3.64

Exponential Trend: 0.1% -1.8%



Regressions

24 Months on Monthly	
1.000	3.357
0.000	0.697
0.001	0.017
0.018	22.000

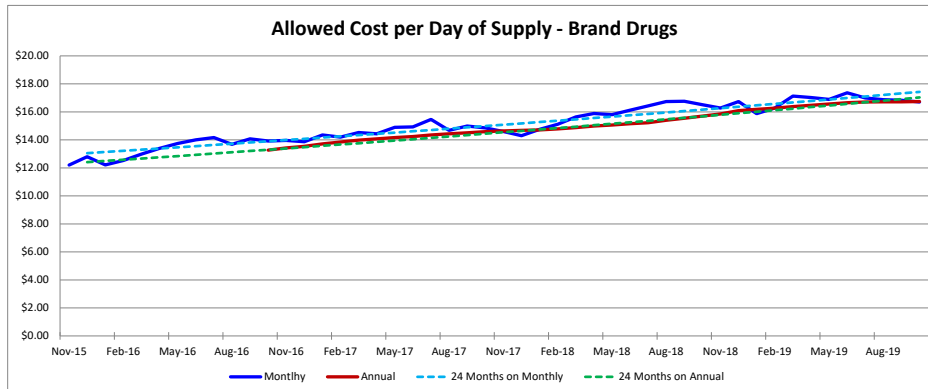
24 Months on Annual	
1.000	32.513
0.000	0.278
0.736	0.007
61.181	22.000

PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

BRAND DRUGS - COST TREND

Incurred Date	MONTHLY DATA				ROLLING 12				EXPONENTIAL FIT	
	Supply	AWP Cost	Cost/ Supply	Monthly Cost Trend	Supply	Adjusted Allowed Charge	Cost/ Supply	Rolling 12 Cost Trend	Monthly Data	Rolling 12 Data
Nov-15	193,387	\$2,359,863	\$12.20							
Dec-15	230,665	\$2,951,543	\$12.80						\$13.05	\$12.41
Jan-16	158,992	\$1,941,403	\$12.21						\$13.14	\$12.50
Feb-16	153,872	\$1,928,780	\$12.53						\$13.22	\$12.59
Mar-16	181,756	\$2,360,185	\$12.99						\$13.30	\$12.67
Apr-16	163,802	\$2,193,980	\$13.39						\$13.38	\$12.76
May-16	159,135	\$2,186,871	\$13.74						\$13.47	\$12.85
Jun-16	155,558	\$2,178,666	\$14.01						\$13.55	\$12.94
Jul-16	149,643	\$2,119,906	\$14.17						\$13.64	\$13.02
Aug-16	160,800	\$2,200,072	\$13.68		1,707,610	\$22,421,270			\$13.73	\$13.12
Sep-16	160,832	\$2,264,218	\$14.08		1,868,442	\$24,685,488			\$13.81	\$13.21
Oct-16	163,355	\$2,273,318	\$13.92		2,031,797	\$26,958,807	\$13.27		\$13.90	\$13.30
Nov-16	161,881	\$2,259,520	\$13.96	14.4%	2,000,291	\$26,858,465	\$13.43		\$13.99	\$13.39
Dec-16	179,104	\$2,483,200	\$13.86	8.4%	1,948,730	\$26,390,121	\$13.54		\$14.08	\$13.48
Jan-17	155,052	\$2,226,005	\$14.36	17.6%	1,944,790	\$26,674,724	\$13.72		\$14.17	\$13.58
Feb-17	139,030	\$1,974,655	\$14.20	13.3%	1,929,948	\$26,720,598	\$13.85		\$14.26	\$13.67
Mar-17	164,438	\$2,388,714	\$14.53	11.9%	1,912,630	\$26,749,127	\$13.99		\$14.34	\$13.76
Apr-17	146,119	\$2,108,734	\$14.43	7.7%	1,894,947	\$26,663,881	\$14.07		\$14.43	\$13.86
May-17	161,626	\$2,408,086	\$14.90	8.4%	1,897,438	\$26,885,095	\$14.17		\$14.52	\$13.95
Jun-17	153,671	\$2,294,212	\$14.93	6.6%	1,895,551	\$27,000,641	\$14.24		\$14.62	\$14.05
Jul-17	152,218	\$2,353,698	\$15.46	9.2%	1,898,126	\$27,234,434	\$14.35		\$14.71	\$14.14
Aug-17	158,257	\$2,322,810	\$14.68	7.3%	1,895,583	\$27,357,172	\$14.43		\$14.80	\$14.24
Sep-17	149,909	\$2,246,461	\$14.99	6.4%	1,884,660	\$27,339,415	\$14.51		\$14.90	\$14.34
Oct-17	171,371	\$2,545,223	\$14.85	6.7%	1,892,676	\$27,611,319	\$14.59	9.9%	\$14.99	\$14.44
Nov-17	168,063	\$2,453,949	\$14.60	4.6%	1,898,858	\$27,805,748	\$14.64	9.1%	\$15.08	\$14.54
Dec-17	178,975	\$2,558,667	\$14.30	3.1%	1,898,729	\$27,881,215	\$14.68	8.4%	\$15.18	\$14.64
Jan-18	145,807	\$2,151,613	\$14.76	2.8%	1,889,484	\$27,806,823	\$14.72	7.3%	\$15.28	\$14.74
Feb-18	132,077	\$1,996,457	\$15.12	6.4%	1,882,531	\$27,828,625	\$14.78	6.8%	\$15.37	\$14.85
Mar-18	149,696	\$2,340,884	\$15.64	7.6%	1,867,789	\$27,780,795	\$14.87	6.4%	\$15.46	\$14.94
Apr-18	146,263	\$2,323,523	\$15.89	10.1%	1,867,933	\$27,995,584	\$14.99	6.5%	\$15.56	\$15.05
May-18	149,357	\$2,359,910	\$15.80	6.0%	1,855,664	\$27,947,407	\$15.06	6.3%	\$15.66	\$15.15
Jun-18	148,045	\$2,386,125	\$16.12	8.0%	1,850,038	\$28,039,320	\$15.16	6.4%	\$15.76	\$15.26
Jul-18	142,956	\$2,349,378	\$16.43	6.3%	1,840,776	\$28,034,999	\$15.23	6.1%	\$15.86	\$15.36
Aug-18	157,222	\$2,631,964	\$16.74	14.1%	1,839,741	\$28,344,152	\$15.41	6.8%	\$15.96	\$15.47
Sep-18	146,843	\$2,460,224	\$16.75	11.8%	1,836,675	\$28,557,916	\$15.55	7.2%	\$16.06	\$15.58
Oct-18	169,677	\$2,801,050	\$16.51	11.2%	1,834,981	\$28,813,743	\$15.70	7.6%	\$16.16	\$15.68
Nov-18	165,903	\$2,700,336	\$16.28	11.5%	1,832,821	\$29,060,130	\$15.86	8.3%	\$16.27	\$15.79
Dec-18	173,010	\$2,895,461	\$16.74	17.1%	1,826,856	\$29,396,924	\$16.09	9.6%	\$16.37	\$15.90
Jan-19	154,103	\$2,445,875	\$15.87	7.6%	1,835,152	\$29,691,186	\$16.18	9.9%	\$16.47	\$16.01
Feb-19	141,370	\$2,300,257	\$16.27	7.6%	1,844,445	\$29,994,986	\$16.26	10.0%	\$16.58	\$16.13
Mar-19	145,897	\$2,498,521	\$17.13	9.5%	1,840,646	\$30,152,624	\$16.38	10.1%	\$16.67	\$16.23
Apr-19	149,585	\$2,546,919	\$17.03	7.2%	1,843,968	\$30,376,020	\$16.47	9.9%	\$16.78	\$16.34
May-19	152,532	\$2,577,280	\$16.90	6.9%	1,847,143	\$30,593,390	\$16.56	10.0%	\$16.89	\$16.45
Jun-19	142,549	\$2,475,173	\$17.36	7.7%	1,841,647	\$30,682,438	\$16.66	9.9%	\$16.99	\$16.57
Jul-19	150,535	\$2,558,589	\$17.00	3.4%	1,849,226	\$30,891,649	\$16.71	9.7%	\$17.10	\$16.68
Aug-19	146,209	\$2,467,491	\$16.88	0.8%	1,838,213	\$30,727,176	\$16.72	8.5%	\$17.21	\$16.80
Sep-19	152,635	\$2,568,925	\$16.83	0.5%	1,844,005	\$30,835,876	\$16.72	7.5%	\$17.32	\$16.92
Oct-19	163,796	\$2,736,614	\$16.71	1.2%	1,838,124	\$30,771,440	\$16.74	6.6%	\$17.43	\$17.03

Exponential Trend: 7.8% 8.6%



Regressions

24 Months on Monthly

1.000	0.002
0.000	1.259
0.697	0.030
50.690	22.000

24 Months on Annual

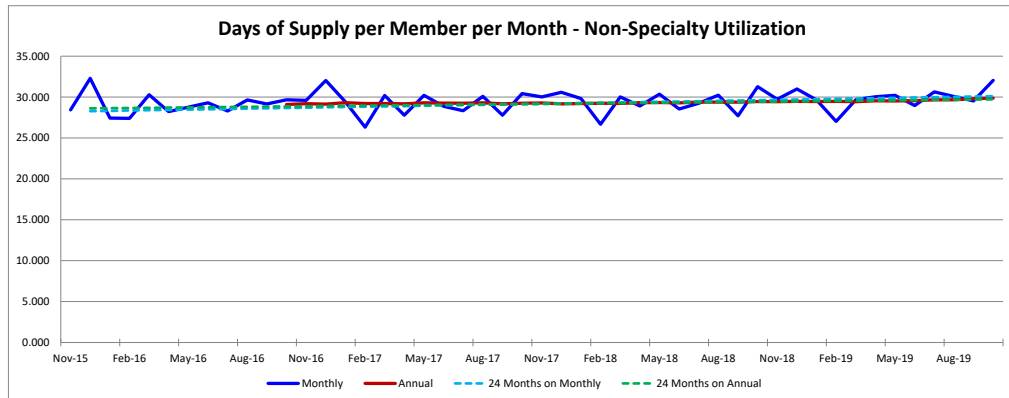
1.000	0.001
0.000	0.325
0.976	0.008
912.288	22.000

PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

NON-SPECIALTY DRUGS - UTILIZATION TREND

Incurred Date	MONTHLY DATA				ROLLING 12				EXPONENTIAL FIT	
	Membership	Supply	Supply per Member	Monthly Utilization Trend	Membership	Supply	Supply per Member	Rolling 12 Utilization Trend	Monthly Data	Rolling 12 Data
Nov-15	57,692	1,640,435	28.434							
Dec-15	57,890	1,869,201	32.289						28.279	28.620
Jan-16	52,944	1,452,347	27.432						28.318	28.644
Feb-16	52,655	1,442,268	27.391						28.357	28.668
Mar-16	52,655	1,594,572	30.283						28.394	28.690
Apr-16	52,628	1,485,341	28.223						28.433	28.714
May-16	52,040	1,496,796	28.762						28.472	28.737
Jun-16	52,000	1,523,092	29.290						28.511	28.762
Jul-16	51,849	1,467,167	28.297						28.549	28.785
Aug-16	51,743	1,534,199	29.650						28.589	28.809
Sep-16	51,752	1,509,054	29.159						28.629	28.833
Oct-16	51,944	1,540,850	29.664		637,792	18,555,322	29.093		28.667	28.856
Nov-16	51,926	1,537,234	29.604	4.1%	632,026	18,452,121	29.195		28.707	28.880
Dec-16	51,220	1,639,971	32.018	-0.8%	625,356	18,222,891	29.140		28.746	28.904
Jan-17	54,466	1,602,157	29.416	7.2%	626,878	18,372,701	29.308		28.786	28.928
Feb-17	54,376	1,431,326	26.323	-3.9%	628,599	18,361,759	29.211		28.826	28.952
Mar-17	54,286	1,639,452	30.200	-0.3%	630,230	18,406,639	29.206		28.862	28.974
Apr-17	54,315	1,509,577	27.793	-1.5%	631,917	18,430,874	29.167		28.902	28.998
May-17	54,511	1,647,314	30.220	5.1%	634,388	18,581,392	29.290		28.941	29.022
Jun-17	54,564	1,575,938	28.882	-1.4%	636,952	18,634,239	29.255		28.981	29.046
Jul-17	54,781	1,551,527	28.322	0.1%	639,884	18,718,599	29.253		29.020	29.069
Aug-17	54,843	1,650,615	30.097	1.5%	642,984	18,835,015	29.293		29.060	29.094
Sep-17	54,384	1,510,575	27.776	-4.7%	645,616	18,836,536	29.176		29.101	29.118
Oct-17	54,362	1,653,491	30.416	2.5%	648,034	18,949,177	29.241	0.5%	29.140	29.141
Nov-17	54,513	1,636,687	30.024	1.4%	650,621	19,048,630	29.278	0.3%	29.180	29.166
Dec-17	54,478	1,666,506	30.590	-4.5%	653,879	19,075,165	29.172	0.1%	29.219	29.189
Jan-18	52,507	1,566,328	29.831	1.4%	651,920	19,039,336	29.205	-0.4%	29.260	29.214
Feb-18	52,433	1,399,107	26.684	1.4%	649,977	19,007,117	29.243	0.1%	29.301	29.238
Mar-18	52,332	1,570,601	30.012	-0.6%	648,023	18,938,266	29.225	0.1%	29.337	29.260
Apr-18	52,560	1,520,012	28.920	4.1%	646,268	18,948,701	29.320	0.5%	29.378	29.285
May-18	52,733	1,600,801	30.357	0.5%	644,490	18,902,188	29.329	0.1%	29.418	29.308
Jun-18	52,720	1,505,017	28.547	-1.2%	642,646	18,831,267	29.303	0.2%	29.458	29.333
Jul-18	53,446	1,562,703	29.239	3.2%	641,311	18,842,443	29.381	0.4%	29.498	29.357
Aug-18	53,468	1,616,437	30.232	0.4%	639,936	18,808,265	29.391	0.3%	29.539	29.381
Sep-18	53,278	1,476,631	27.716	-0.2%	638,830	18,774,321	29.389	0.7%	29.580	29.406
Oct-18	53,566	1,674,986	31.270	2.8%	638,034	18,795,816	29.459	0.7%	29.620	29.429
Nov-18	53,900	1,602,977	29.740	-0.9%	637,421	18,762,106	29.434	0.5%	29.661	29.454
Dec-18	53,803	1,666,853	30.981	1.3%	636,746	18,762,453	29.466	1.0%	29.701	29.478
Jan-19	54,540	1,617,145	29.651	-0.6%	638,779	18,813,270	29.452	0.8%	29.742	29.502
Feb-19	54,495	1,472,715	27.025	1.3%	640,841	18,886,878	29.472	0.8%	29.783	29.527
Mar-19	54,459	1,616,407	29.681	-1.1%	642,968	18,932,684	29.446	0.8%	29.821	29.549
Apr-19	54,100	1,624,808	30.033	3.9%	644,508	19,037,480	29.538	0.7%	29.862	29.574
May-19	53,986	1,630,699	30.206	-0.5%	645,761	19,067,378	29.527	0.7%	29.902	29.598
Jun-19	53,631	1,553,564	28.968	1.5%	646,672	19,115,925	29.560	0.9%	29.944	29.623
Jul-19	52,969	1,622,817	30.637	4.8%	646,195	19,176,039	29.675	1.0%	29.984	29.647
Aug-19	52,672	1,583,669	30.067	-0.5%	645,399	19,143,271	29.661	0.9%	30.026	29.671
Sep-19	52,492	1,549,724	29.523	6.5%	644,613	19,216,364	29.811	1.4%	30.067	29.696
Oct-19	52,336	1,676,800	32.039	2.5%	643,383	19,218,178	29.871	1.4%	30.108	29.720

Exponential Trend: 1.6% 1.0%



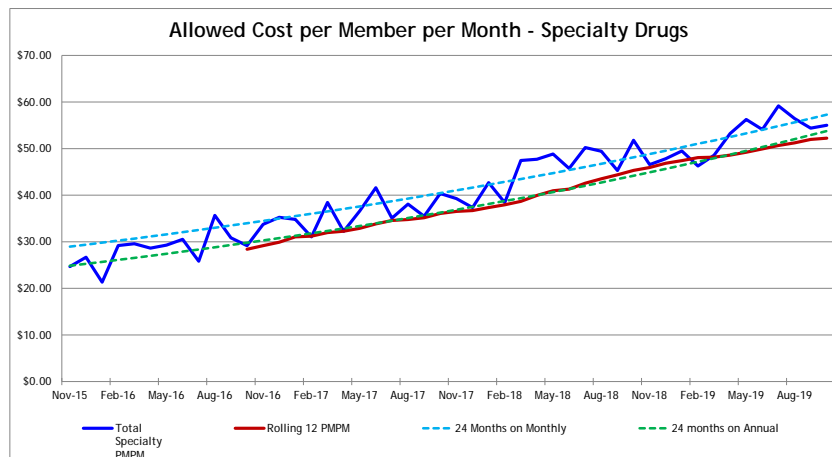
Regressions	24 Months on Monthly		24 Months on Annual	
	1.000	4.248	1.000	9.146
	0.000	1.789	0.000	0.087
	0.051	0.042	0.891	0.002
	1.180	22.000	180.417	22.000

PHARMACY TREND DEVELOPMENT - SPECIALTY TREND CALCULATION

Incurred Date	MONTHLY DATA			ROLLING 12			EXPONENTIAL FIT	
	Members	Contract Adjusted	Total Specialty	Members	Contract Adjusted	Rolling 12	Monthly Data	Rolling 12 Data
		Charges	PMPM		Charges	PMPM		
Nov-15	57,692	\$ 1,423,057	\$24.67				\$28.96	\$24.86
Dec-15	57,890	\$ 1,545,382	\$26.70				\$29.38	\$25.27
Jan-16	52,944	\$ 1,129,447	\$21.33				\$29.81	\$25.69
Feb-16	52,655	\$ 1,538,001	\$29.21				\$30.26	\$26.13
Mar-16	52,655	\$ 1,557,010	\$29.57				\$30.68	\$26.54
Apr-16	52,628	\$ 1,506,423	\$28.62				\$31.14	\$26.98
May-16	52,040	\$ 1,524,654	\$29.30				\$31.59	\$27.43
Jun-16	52,000	\$ 1,587,963	\$30.54				\$32.06	\$27.89
Jul-16	51,849	\$ 1,339,390	\$25.83				\$32.52	\$28.34
Aug-16	51,743	\$ 1,845,901	\$35.67				\$33.00	\$28.82
Sep-16	51,752	\$ 1,596,437	\$30.85				\$33.49	\$29.31
Oct-16	51,944	\$ 1,515,744	\$29.18	637,792	\$ 18,109,410	\$28.39	\$33.98	\$29.78
Nov-16	51,926	\$ 1,751,741	\$33.74	632,026	\$ 18,438,094	\$29.17	\$34.48	\$30.29
Dec-16	51,220	\$ 1,805,763	\$35.26	625,356	\$ 18,698,475	\$29.90	\$34.98	\$30.78
Jan-17	54,466	\$ 1,895,094	\$34.79	626,878	\$ 19,464,121	\$31.05	\$35.50	\$31.30
Feb-17	54,376	\$ 1,689,301	\$31.07	628,599	\$ 19,615,420	\$31.20	\$36.03	\$31.83
Mar-17	54,286	\$ 2,086,737	\$38.44	630,230	\$ 20,145,147	\$31.96	\$36.51	\$32.31
Apr-17	54,315	\$ 1,751,569	\$32.25	631,917	\$ 20,390,293	\$32.27	\$37.06	\$32.86
May-17	54,511	\$ 1,995,508	\$36.61	634,388	\$ 20,861,148	\$32.88	\$37.59	\$33.39
Jun-17	54,564	\$ 2,269,379	\$41.59	636,952	\$ 21,542,563	\$33.82	\$38.15	\$33.96
Jul-17	54,781	\$ 1,921,918	\$35.08	639,884	\$ 22,125,091	\$34.58	\$38.70	\$34.51
Aug-17	54,843	\$ 2,087,950	\$38.07	642,984	\$ 22,367,139	\$34.79	\$39.28	\$35.09
Sep-17	54,384	\$ 1,929,773	\$35.48	645,616	\$ 22,700,475	\$35.16	\$39.86	\$35.68
Oct-17	54,362	\$ 2,194,104	\$40.36	648,034	\$ 23,378,835	\$36.08	\$40.44	\$36.27
Nov-17	54,513	\$ 2,140,552	\$39.27	650,621	\$ 23,767,646	\$36.53	\$41.04	\$36.88
Dec-17	54,478	\$ 2,034,702	\$37.35	653,879	\$ 23,996,585	\$36.70	\$41.63	\$37.48
Jan-18	52,507	\$ 2,241,445	\$42.69	651,920	\$ 24,342,937	\$37.34	\$42.25	\$38.11
Feb-18	52,433	\$ 2,013,417	\$38.40	649,977	\$ 24,667,053	\$37.95	\$42.88	\$38.75
Mar-18	52,332	\$ 2,482,749	\$47.44	648,023	\$ 25,063,065	\$38.68	\$43.46	\$39.34
Apr-18	52,560	\$ 2,507,962	\$47.72	646,268	\$ 25,819,458	\$39.95	\$44.11	\$40.01
May-18	52,733	\$ 2,574,864	\$48.83	644,490	\$ 26,398,814	\$40.96	\$44.74	\$40.66
Jun-18	52,720	\$ 2,410,671	\$45.73	642,646	\$ 26,540,106	\$41.30	\$45.41	\$41.35
Jul-18	53,446	\$ 2,683,764	\$50.21	641,311	\$ 27,301,952	\$42.57	\$46.06	\$42.02
Aug-18	53,468	\$ 2,643,020	\$49.43	639,936	\$ 27,857,022	\$43.53	\$46.75	\$42.73
Sep-18	53,278	\$ 2,413,642	\$45.30	638,830	\$ 28,340,891	\$44.36	\$47.45	\$43.45
Oct-18	53,566	\$ 2,774,897	\$51.80	638,034	\$ 28,921,684	\$45.33	\$48.13	\$44.16
Nov-18	53,900	\$ 2,509,540	\$46.56	637,421	\$ 29,290,672	\$45.95	\$48.85	\$44.90
Dec-18	53,803	\$ 2,573,877	\$47.84	636,746	\$ 29,829,847	\$46.85	\$49.55	\$45.64
Jan-19	54,540	\$ 2,699,520	\$49.50	638,779	\$ 30,287,922	\$47.42	\$50.29	\$46.41
Feb-19	54,495	\$ 2,521,749	\$46.27	640,841	\$ 30,796,254	\$48.06	\$51.04	\$47.19
Mar-19	54,459	\$ 2,645,803	\$48.58	642,968	\$ 30,959,308	\$48.15	\$51.72	\$47.91
Apr-19	54,100	\$ 2,880,408	\$53.24	644,508	\$ 31,331,754	\$48.61	\$52.49	\$48.72
May-19	53,986	\$ 3,036,501	\$56.25	645,761	\$ 31,793,391	\$49.23	\$53.25	\$49.51
Jun-19	53,631	\$ 2,900,913	\$54.09	646,672	\$ 32,283,633	\$49.92	\$54.04	\$50.35
Jul-19	52,969	\$ 3,134,275	\$59.17	646,195	\$ 32,734,144	\$50.66	\$54.82	\$51.17
Aug-19	52,672	\$ 2,974,058	\$56.46	645,399	\$ 33,065,181	\$51.23	\$55.64	\$52.03
Sep-19	52,492	\$ 2,854,873	\$54.39	644,613	\$ 33,506,412	\$51.98	\$56.47	\$52.91
Oct-19	52,336	\$ 2,878,380	\$55.00	643,383	\$ 33,609,895	\$52.24	\$57.28	\$53.77

Exponential Trend:

19.0% 21.8%



24 Months on Monthly	
1.000	0.000
0.000	2.770
0.717	0.066
55.807	22.000

24 Months on Rolling 12	
1.001	0.000
0.000	0.751
0.978	0.018
971.799	22.000

PHARMACY TREND DEVELOPMENT
SUMMARY

EXHIBIT REDACTED

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3A

Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

Index	Product	In-Network Benefits							Out-of-Network Benefits			Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	Active
1	VFP	\$200	20%	\$800	\$20	\$20			\$400	30%	\$1,600	1.0353
2	VFP	\$300	10%	\$1,300	\$10	\$30	\$100	\$50	\$600	30%	\$2,600	1.0202
3	VFP	\$500	20%	\$1,500	\$20	\$20			\$1,000	30%	\$3,000	0.9730
4	VFP	\$500	20%	\$1,500	\$20	\$40	\$250	\$250	\$1,000	30%	\$3,000	0.9745
5	VFP	\$500	20%	\$1,750	\$20	\$20			\$1,000	30%	\$3,500	0.9623
6	VFP	\$1,000	20%	\$2,300	\$20	\$20	\$100		\$2,000	30%	\$4,600	0.9278
7	VFP	\$1,000	0%	\$2,350	\$25	\$25	\$50	\$50	\$2,000	30%	\$3,500	0.9775
8	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	0.8708
9	VFP	\$1,000	0%	\$2,000	\$30	\$50	\$150		\$2,000	30%	\$4,000	0.9559
10	VFP	\$1,500	20%	\$3,000	\$25	\$45	\$250	\$250	\$3,000	30%	\$6,000	0.8789
11	VFP	\$2,000	30%	\$3,500	\$20	\$20	\$500		\$3,000	50%	\$6,000	0.8459
12	VFP	\$2,000	20%	\$4,000	\$40	\$40	\$150		\$4,000	30%	\$8,000	0.8340
13	VFP	\$2,500	20%	\$5,000	\$20	\$20			\$5,000	30%	\$10,000	0.7989
14	VFP	\$2,500	20%	\$5,150	\$20	\$40			\$5,000	30%	\$10,300	0.7808
15	VFP	\$2,500	20%	\$6,000	\$20	\$30			\$5,000	30%	\$12,000	0.7717
16	VFP	\$3,000	0%	\$3,000	\$30	\$40	\$200		\$6,000	30%	\$6,000	0.8613
17	VFP	\$3,000	0%	\$4,000	\$30	\$50	\$150		\$6,000	30%	\$8,000	0.8387
18	VFP	\$4,000	0%	\$5,000	\$30	\$50	\$150		\$8,000	30%	\$10,000	0.7997
19	VFP	\$4,000	20%	\$6,000	\$40	\$40	\$150		\$8,000	30%	\$12,000	0.7562
20	VFP	\$5,000	0%	\$5,000	\$25	\$25			\$10,000	30%	\$10,000	0.7504
21	COMP	\$2,000	10%	\$3,000								0.8323
22	COMP	\$3,000	0%	\$3,000								0.8034
23	COMP	\$5,000	0%	\$5,000								0.7098
24	COMP	\$6,550	0%	\$6,550								0.6592
25	COMP	\$6,850	0%	\$6,850								0.6508
26	COMP	\$7,350	0%	\$7,350								0.6376

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.

Vermont Health Partnership (VHP) Medical Plans

index	Product	VHP In-Network Benefits							VHP Out-of-Network Benefits			Relativity Factor
		IP	OP	PCP	SCP	ER	AMB	OOPM	Deductible	Coinsurance	Out-of-Pocket	Active
1	VHP ¹	\$0	\$0	\$10	\$20	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0592
2	VHP ¹	\$250	\$100	\$15	\$25	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0467
3	VHP ¹	\$250	\$125	\$20	\$40	\$150	\$0	\$8,150	\$500	30%	\$14,700	1.0262
4	VHP ¹	\$250	\$250	\$20	\$20	\$200	\$100	\$8,150	\$1,000	30%	\$14,700	1.0337
5	VHP ¹	\$500	\$250	\$20	\$30	\$100	\$0	\$8,150	\$500	30%	\$14,700	1.0305
6	VHP ¹	\$750	\$750	\$20	\$30	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0183

PCP	Primary Care Physician Copay
SCP	Specialist Physician Copay
IP	Inpatient Care Deductible (max of 3/yr per family)
OP	Outpatient Surgery Copay
ER	Emergency Room Copay
AMB	Ambulance Copay
OOPM	Per ACA, all copays accumulate toward the Out of Pocket Maximum

1. All VHP Plans have a DME rider benefit of: \$100 deductible, 20% coinsurance, built into the relativity.
2. ER Copay: the displayed member copay goes toward the facility allowed charges.
Associated physician and ancillary charges are the covered at 100%.

BCBSVT Indemnity Consumer Driven Health Plans (CDHPs)

Index	Product	In-Network							Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Active
1	CDHP	\$1,500	0%	\$1,500	\$1,400	N/A	N/A	SAAO	1.1275
2	CDHP	\$1,500	20%	\$2,500	\$1,400	N/A	N/A	SAAO	1.0618
3	CDHP	\$2,000	0%	\$2,000	\$1,400	N/A	N/A	SAAO	1.0773
4	CDHP	\$2,000	20%	\$4,000	\$1,400	N/A	N/A	SAAO	0.9916
5	CDHP	\$2,500	0%	\$2,500	\$1,400	0%	N/A	SAAO	1.0443
6	CDHP	\$2,500	0%	\$2,500	\$1,400	N/A	N/A	SAAO	1.0357
7	CDHP	\$2,500	0%	\$3,500	\$1,400	0%	\$10/\$30/\$50	SAAO	1.0380
8	CDHP	\$2,500	10%	\$3,500	\$1,400	0%	N/A	SAAO	1.0061
9	CDHP	\$2,500	20%	\$3,500	\$1,400	N/A	N/A	SAAO	0.9863
10	CDHP	\$2,500	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9600
11	CDHP	\$2,600	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9562
12	CDHP	\$2,700	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9525
13	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	\$10/\$35/\$50	SAAO	1.0004
14	CDHP	\$3,000	0%	\$3,000	\$1,400	0%	N/A	SAAO	1.0099
15	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	N/A	SAAO	1.0004
16	CDHP	\$3,000	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9425
17	CDHP	\$3,500	0%	\$3,500	\$1,400	0%	N/A	SAAO	0.9801
18	CDHP	\$4,000	0%	\$4,000	\$1,400	0%	N/A	SAAO	0.9539
19	CDHP	\$4,000	20%	\$6,650	\$1,400	0%	N/A	SAAO	0.8872
20	CDHP	\$5,000	0%	\$5,000	\$1,400	0%	N/A	SAAO	0.9094
21	CDHP	\$5,000	0%	\$5,000	\$1,400	N/A	N/A	SAAO	0.8979
22	CDHP	\$6,000	0%	\$6,000	\$1,400	0%	N/A	SAAO	0.8731
23	CDHP	\$6,350	0%	\$6,350	\$1,400	0%	N/A	SAAO	0.8619
24	CDHP	\$6,450	0%	\$6,450	\$1,400	N/A	N/A	SAAO	0.8463
25	CDHP	\$6,550	0%	\$6,550	\$1,400	0%	N/A	SAAO	0.8557
26	CDHP	\$6,550	0%	\$6,550	\$1,400	N/A	N/A	SAAO	0.8432
27	CDHP	\$6,650	0%	\$6,650	\$1,400	0%	N/A	SAAO	0.8527
28	CDHP	\$6,650	0%	\$6,650	\$1,400	N/A	N/A	SAAO	0.8402
29	CDHP	\$6,850	0%	\$6,850	\$1,400	0%	N/A	SAAO	0.8468
30	CDHP	\$7,350	0%	\$7,350	\$1,400	0%	N/A	SAAO	0.8328

1. **Wellness Rx:** if applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for **Wellness Rx** accumulates toward the Out-of-Pocket Maximum.
2. **All other drugs** are subject to deductible. Once the deductible is met, drugs are subject to the **Drugs After Deductible** cost share until the Out-of-Pocket Maximum is met.
3. The **Rx OOPM Limit** is as described in Vermont Act 171.

Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Relativity
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			Active
1	CM1	\$100	\$5	40%	60%	\$10	40%	60%	\$1,400	SAAO	0.1806
2	CM2	\$0	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	0.2189
3	CM2	\$100	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	0.2097
4	COI	\$1	30%	30%	40%	30%	30%	40%	\$1,400	SAAO	0.1851
5	COI	\$1	50%	50%	50%	50%	50%	50%	\$1,400	SAAO	0.1736
6	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	0.2870
7	COP	\$0	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	0.2299
8	COP	\$0	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	0.2225
9	COP	\$0	\$10	\$30	\$60	\$20	\$60	\$120	\$1,400	SAAO	0.2221
10	COP	\$0	\$10	\$35	\$60	\$20	\$70	\$120	\$1,400	SAAO	0.2168
11	COP	\$0	\$15	\$25	\$40	\$30	\$50	\$80	\$1,400	SAAO	0.2814
12	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.2248
13	COP	\$0	\$15	\$35	\$50	\$30	\$70	\$100	\$1,400	SAAO	0.2173
14	COP	\$0	\$20	\$40	\$60	\$40	\$80	\$120	\$1,400	SAAO	0.2132
15	COP	\$0	\$20	\$40	\$80	\$40	\$80	\$160	\$1,400	SAAO	0.2126
16	COP	\$0	\$25	\$50	\$75	\$50	\$100	\$150	\$1,400	SAAO	0.2047
17	COP	\$0	\$5	\$15	\$30	\$10	\$30	\$60	\$1,400	SAAO	0.2963
18	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	0.2251
19	COP	\$50	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	0.2257
20	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	0.2928
21	COP	\$100	\$10	\$15	\$30	\$20	\$30	\$60	\$1,400	SAAO	0.2809
22	COP	\$100	\$10	\$25	\$45	\$20	\$50	\$90	\$1,400	SAAO	0.2222
23	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	0.2149
24	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	100%	0.2185
25	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	0.2147
26	COP	\$100	\$10	\$40	\$60	\$20	\$80	\$120	\$1,400	SAAO	0.2084
27	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.2180
28	COP	\$100	\$15	\$40	\$60	\$30	\$80	\$120	\$1,400	SAAO	0.2053
29	COP	\$100	\$5	\$20	\$40	\$10	\$40	\$80	\$1,400	SAAO	0.2284
30	COP	\$150	\$20	\$80	\$100	\$40	\$160	\$200	\$1,400	SAAO	0.1956

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COI/COI); CM2 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

Medicare Secondary Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	
1	JPLAN	\$100	20%	\$500	\$10	\$10						0.3771
2	JPLAN	\$100	20%	\$500	\$20	\$20						0.3679
3	VFP	\$0	0%	\$0	\$20	\$20	\$50		\$250	20%	\$1,000	0.3947
4	VFP	\$100	20%	\$500	\$10	\$10			\$200	30%	\$1,000	0.3391
5	VFP	\$1,000	0%	\$2,350	\$25	\$25	\$50	\$50	\$2,000	30%	\$3,500	0.2597
6	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	0.2238
7	VFP	\$500	20%	\$1,600	\$10	\$10			\$1,000	30%	\$3,000	0.2781

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.
2. The J Plan deductible applies only to infusion therapy, DME and prosthetics ambulance.

Medicare Secondary Consumer Driven Health Plans (CDHPs)

Index	Product	In-Network							Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Medicare Secondary
1	CDHP	\$2,500	0%	\$2,500	\$1,400	0%	N/A	SAAO	0.8573
2	CDHP	\$3,500	0%	\$3,500	\$1,400	0%	N/A	SAAO	0.8137
3	CDHP	\$5,000	0%	\$5,000	\$1,400	N/A	\$5/\$20/\$40	SAAO	0.6940

1. Wellness Rx: If applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for Wellness Rx accumulates toward the Out-of-Pocket Maximum.
2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the Drugs After Deductible cost share until the Out-of-Pocket Maximum is met.
3. The Rx OOPM Limit is as described in Vermont Act 171.

Medicare Secondary Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Relativity
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			Medicare Secondary
1	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	0.9588
2	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.7143
3	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	0.7403
4	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	1.0058
5	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	0.6978
6	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.6994

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;
If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	Leverage Factor
1	VFP	\$200	20%	\$800	\$20	\$20			\$400	30%	\$1,600	1.0026
2	VFP	\$300	10%	\$1,300	\$10	\$30	\$100	\$50	\$600	30%	\$2,600	1.0029
3	VFP	\$500	20%	\$1,500	\$20	\$20			\$1,000	30%	\$3,000	1.0039
4	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	1.0063
5	VFP	\$1,000	0%	\$2,000	\$30	\$50	\$150		\$2,000	30%	\$4,000	1.0043
6	VFP	\$1,500	20%	\$3,000	\$25	\$45	\$250	\$250	\$3,000	30%	\$6,000	1.0061
7	VFP	\$2,000	30%	\$3,500	\$20	\$20	\$500		\$3,000	50%	\$6,000	1.0069
8	VFP	\$3,000	0%	\$4,000	\$30	\$50	\$150		\$6,000	30%	\$8,000	1.0070
9	VFP	\$4,000	0%	\$5,000	\$30	\$50	\$150		\$8,000	30%	\$10,000	1.0080
10	VFP	\$5,000	0%	\$5,000	\$25	\$25			\$10,000	30%	\$10,000	1.0094
11	COMP	\$2,000	10%	\$3,000								1.0074
13	COMP	\$5,000	0%	\$5,000								1.0107

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are the covered at 100%.

Vermont Health Partnership (VHP) Medical Plans

index	Product	VHP In-Network Benefits							VHP Out-of-Network Benefits			
		Inpatient Care Deductible ²	Outpatient Surgery Copay	Office Copay	Specialist Copay	ER ² Copay	AMB Copay	Out-of-Pocket	Deductible	Coinsurance	Out-of-Pocket	Leverage Factor
1	VHP ¹	\$0	\$0	\$10	\$20	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0011
2	VHP ¹	\$250	\$100	\$15	\$25	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0014
3	VHP ¹	\$250	\$250	\$20	\$20	\$200	\$100	\$8,150	\$1,000	30%	\$14,700	1.0016
4	VHP ¹	\$750	\$750	\$20	\$30	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0020

1. All VHP Plans have a DME rider benefit of: \$100 deductible, 20% coinsurance, built into the relativity.

2. Maximum of 3/yr per family

3. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.

BCBSVT Comprehensive Consumer Driven Health Plans (CDHPs)

index	Product	In-Network							Leverage Factor	
		Deductible	Coinsurance	Out-of-Pocket	Rx OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Medical	Rx
1	CDHP	\$1,500	0%	\$1,500	\$1,400	N/A	N/A	SAAO	1.0049	1.0068
2	CDHP	\$2,500	20%	\$5,000	\$1,400	0%	N/A	SAAO	1.0091	1.0057
3	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	N/A	SAAO	1.0077	1.0086
4	CDHP	\$5,000	0%	\$5,000	\$1,400	0%	N/A	SAAO	1.0105	1.0059
5	CDHP	\$6,000	0%	\$6,000	\$1,400	0%	N/A	SAAO	1.0116	1.0061
6	CDHP	\$6,850	0%	\$6,850	\$1,400	0%	N/A	SAAO	1.0124	1.0062

1. Wellness Rx: if applicable, cost sharing rules apply *before* the deductible is satisfied.

The member's cost share for Wellness Rx accumulates toward the Out-of-Pocket Maximum.

2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the Drugs After Deductible cost share until the Out-of-Pocket Maximum is met.

3. The Rx OOPM Limit is as described in Vermont Act 171.

Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Leverage Factor
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			
1	CM1	\$100	\$5	40%	60%	\$10	40%	60%	\$1,400	SAAO	1.0082
2	CM2	\$0	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	1.0055
3	CM2	\$100	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	1.0068
4	COI	\$1	30%	30%	40%	30%	40%	40%	\$1,400	SAAO	1.0074
5	COI	\$1	50%	50%	50%	50%	50%	50%	\$1,400	SAAO	1.0094
6	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	1.0045
7	COP	\$0	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	1.0053
8	COP	\$0	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	1.0055
9	COP	\$0	\$10	\$30	\$60	\$20	\$60	\$120	\$1,400	SAAO	1.0056
10	COP	\$0	\$10	\$35	\$60	\$20	\$70	\$120	\$1,400	SAAO	1.0058
11	COP	\$0	\$15	\$25	\$40	\$30	\$50	\$80	\$1,400	SAAO	1.0052
12	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	1.0060
13	COP	\$0	\$15	\$35	\$50	\$30	\$70	\$100	\$1,400	SAAO	1.0063
14	COP	\$0	\$20	\$40	\$60	\$40	\$80	\$120	\$1,400	SAAO	1.0069
15	COP	\$0	\$20	\$40	\$80	\$40	\$80	\$160	\$1,400	SAAO	1.0070
16	COP	\$0	\$25	\$50	\$75	\$50	\$100	\$150	\$1,400	SAAO	1.0076
17	COP	\$0	\$5	\$15	\$30	\$10	\$30	\$60	\$1,400	SAAO	1.0035
18	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	1.0046
19	COP	\$50	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	1.0059
20	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	1.0039
21	COP	\$100	\$10	\$15	\$30	\$20	\$30	\$60	\$1,400	SAAO	1.0052
22	COP	\$100	\$10	\$25	\$45	\$20	\$50	\$90	\$1,400	SAAO	1.0064
23	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	1.0066
24	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	100%	1.0061
25	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	1.0067
26	COP	\$100	\$10	\$40	\$60	\$20	\$80	\$120	\$1,400	SAAO	1.0070
27	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	1.0070
28	COP	\$100	\$15	\$40	\$60	\$30	\$80	\$120	\$1,400	SAAO	1.0075
29	COP	\$100	\$5	\$20	\$40	\$10	\$40	\$80	\$1,400	SAAO	1.0055
30	COP	\$150	\$20	\$80	\$100	\$40	\$160	\$200	\$1,400	SAAO	1.0090

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COI/COI); CM2 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

EXHIBIT REDACTED

Tier Factors for Benefits with Separate Medical and Pharmacy Deductibles

Out-of-Pocket Range Type		2-Tier		3-Tier			4-Tier			
		Single	Family	Single	2-Person	Family	Single	Subscriber & Spouse	Subscriber & Children	Family
NA/Stacked	2x Family	1.000	2.376	1.000	2.000	2.822	1.000	2.000	1.746	2.911
NA/Stacked	2.5x Family	1.000	2.370	1.000	2.000	2.811	1.000	2.000	1.744	2.900
NA/Stacked	3x Family	1.000	2.369	1.000	2.000	2.808	1.000	2.000	1.744	2.896
\$0 - \$3,499	Hybrid	1.000	2.292	1.000	1.817	2.742	1.000	1.909	1.673	2.831
\$3,500 - \$4,999	Hybrid	1.000	2.203	1.000	1.747	2.636	1.000	1.837	1.595	2.724
\$5,000 - \$7,350	Hybrid	1.000	2.211	1.000	1.761	2.637	1.000	1.853	1.595	2.726

Tier Factors for Benefits with Integrated Medical and Pharmacy Deductibles

Out-of-Pocket Range Type		2-Tier		3-Tier			4-Tier			
		Single	Family	Single	2-Person	Family	Single	Subscriber & Spouse	Subscriber & Children	Family
NA/Stacked	2x Family	1.000	2.376	1.000	2.000	2.822	1.000	2.000	1.746	2.911
NA/Stacked	2.5x Family	1.000	2.370	1.000	2.000	2.811	1.000	2.000	1.744	2.900
NA/Stacked	3x Family	1.000	2.369	1.000	2.000	2.808	1.000	2.000	1.744	2.896
\$0 - \$3,499	Aggregate	1.000	2.269	1.000	1.776	2.737	1.000	1.872	1.617	2.831
\$3,500 - \$4,999	Aggregate	1.000	2.189	1.000	1.715	2.639	1.000	1.810	1.549	2.732
\$5,000 - \$7,350	Aggregate	1.000	2.118	1.000	1.662	2.551	1.000	1.754	1.496	2.642
\$0 - \$3,499	Hybrid	1.000	2.269	1.000	1.776	2.737	1.000	1.872	1.617	2.831
\$3,500 - \$4,999	Hybrid	1.000	2.195	1.000	1.722	2.643	1.000	1.817	1.555	2.735
\$5,000 - \$7,350	Hybrid	1.000	2.217	1.000	1.772	2.639	1.000	1.868	1.584	2.730

Example of Manual Rate Adjustment

Manual Rate	\$632.81
Average Age/Gender Factor	1.000
Average Industry Factor	1.000
Projection Period	1/1/2021
Trend Factor	7.50%

Group Information	Active	Medicare Primary
Age/Gender Factor	0.940	1.030
Industry Factor	0.965	1.000
Projection Period	1/1/2021	

Contract Conversion	Contract Distribution	Members	Tier Factor	"Contract Tiers"
Single	25	25	1	25
Two-Person	25	50	2.000	50
Family	50	197	2.822	141.09
	100	272		216.09

		Active	Medicare Primary
Manual Rate	A	\$632.81	\$426.98
Adjustment for Age/Gender	B = 0.94 / 1	0.9400	1.0300
Adjustment for Industry	C = 0.965 / 1	0.9650	1.0000
Adjustment for Trend	D	1.0000	1.0000
Pharmacy Contract Adjustment	E =	1.0000	0.0000
Contract Conversion Factor	F = 216.09 / 272	1.2587	1.0000
Adjusted Manual Rate	G = A x B x C x D x E x F	\$722.55	\$0.00

Industry Factors

2-Digit SIC Code	Industry Description	Normalized Factor
01	Agricultural Production - Crops	0.9594
02	Agricultural Production - Livestock And Animal Specialties	0.9664
07	Agricultural Services	0.9598
08	Forestry	0.9652
09	Fishing, Hunting And Trapping	1.0431
10	Metal Mining	1.0988
12	Coal Mining	1.1066
13	Oil And Gas Extraction	1.0115
14	Mining And Quarrying Of Nonmetallic Minerals, Except Fuels	1.0756
15	Building Cnstrctn - General Contractors & Operative Builders	0.9790
16	Heavy Cnstrctn, Except Building Construction - Contractors	0.9732
17	Construction - Special Trade Contractors	0.9743
20	Food And Kindred Products	0.9279
21	Tobacco Products	0.9917
22	Textile Mill Products	0.9441
23	Apparel, Finished Prdcts From Fabrics & Similar Materials	0.9564
24	Lumber And Wood Products, Except Furniture	0.9898
25	Furniture And Fixtures	0.9441
26	Paper And Allied Products	0.9540
27	Printing, Publishing And Allied Industries	0.9349
28	Chemicals And Allied Products	0.9829
29	Petroleum Refining And Related Industries	0.9837
30	Rubber And Miscellaneous Plastic Products	0.9401
31	Leather And Leather Products	0.9698
32	Stone, Clay, Glass, And Concrete Products	0.9770
33	Primary Metal Industries	0.9625
34	Fabricated Metal Prdcts, Except Machinery & Transport Eqpmnt	0.9430
35	Industrial And Commercial Machinery And Computer Equipment	0.9401
36	Electronic, Elctrcl Eqpmnt & Cmpnts, Excpt Computer Eqpmnt	0.9257
37	Transportation Equipment	0.9720
38	Mesr/Anlyz/Cntrl Instrmnts; Photo/Med/Opt Gds; Watches/Clocks	0.9242
39	Miscellaneous Manufacturing Industries	0.9384
40	Railroad Transportation	0.9837
41	Local, Suburban Transit & Interurbn Hgwy Passenger Transport	1.0250
42	Motor Freight Transportation	1.0257
43	United States Postal Service	0.9520
44	Water Transportation	1.0036
45	Transportation By Air	0.9500
46	Pipelines, Except Natural Gas	0.9679
47	Transportation Services	0.9322
48	Communications	0.9078
49	Electric, Gas And Sanitary Services	0.9758
50	Wholesale Trade - Durable Goods	0.9545
51	Wholesale Trade - Nondurable Goods	0.9444
52	Building Matrials, Hrdwr, Garden Supply & Mobile Home Dealsr	0.9433
53	General Merchandise Stores	0.9428
54	Food Stores	0.9452
55	Automotive Dealers And Gasoline Service Stations	1.0175
56	Apparel And Accessory Stores	0.9441
57	Home Furniture, Furnishings And Equipment Stores	0.9361
58	Eating And Drinking Places	1.0690
59	Miscellaneous Retail	0.9748
60	Depository Institutions	0.9282
61	Nondepository Credit Institutions	0.8983
62	Security & Commodity Brokers, Dealers, Exchanges & Services	0.9286
63	Insurance Carriers	0.9520
64	Insurance Agents, Brokers And Service	0.9520
65	Real Estate	0.9758

Industry Factors

2-Digit SIC Code	Industry Description	Normalized Factor
67	Holding And Other Investment Offices	0.9282
70	Hotels, Rooming Houses, Camps, And Other Lodging Places	1.0179
72	Personal Services	0.9981
73	Business Services	0.9416
75	Automotive Repair, Services And Parking	0.9897
76	Miscellaneous Repair Services	0.9547
78	Motion Pictures	0.9673
79	Amusement And Recreation Services	1.0391
80	Health Services	1.0948
81	Legal Services	0.9877
82	Educational Services	0.9451
83	Social Services	1.0948
84	Museums, Art Galleries And Botanical And Zoological Gardens	0.9520
86	Membership Organizations	1.0002
87	Engineering, Accounting, Research, Management & Related Svcs	0.9036
88	Private Households	0.9520
89	Services, Not Elsewhere Classified	0.9560
91	Executive, Legislative & General Government, Except Finance	1.0948
92	Justice, Public Order And Safety	1.0948
93	Public Finance, Taxation And Monetary Policy	1.0091
94	Administration Of Human Resource Programs	1.0155
95	Administration Of Environmental Quality And Housing Programs	1.0075
96	Administration Of Economic Programs	1.0091
97	National Security And International Affairs	1.0401
99	Nonclassifiable Establishments	0.9520

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
ADMINISTRATIVE CHARGES DEVELOPMENT

EXHIBIT 5A

Reconciliation of Experience Base Administrative Expense to Restated GAAP Expenses

(Dollars in 000's)

Business Segment	1/19 - 11/19 Experience Base	Reconciliation to GAAP ⁽¹⁾		
		Commissions	Reclassification Items ⁽²⁾	Reported Expenses
Large Group				
BCBSVT Insured	\$5,578	\$1,169	(\$399)	\$7,146
TVHP Insured	\$1,708	\$333	(\$56)	\$2,097
Insured Large Group Subtotal	\$7,286	\$1,502	(\$455)	\$9,243
BCBSVT Cost Plus ⁽³⁾ and ASO	\$26,466	\$642	(\$809)	\$27,917
Individual/Other				
BCBSVT Small Group (QHP and Non-QHP)	\$13,735	\$859	(\$1,014)	\$15,608
BCBSVT Individual (QHP and Non-QHP)	\$11,594	\$459	(\$790)	\$12,843
TVHP Small Group	(\$0)	\$0	(\$0)	\$0
Medicare Supplement	\$1,370	\$3	(\$46)	\$1,418
TVHP Medigap Blue	\$3,192	\$6	(\$104)	\$3,302
Other Member Categories				
FEP	\$3,993	\$0	(\$62)	\$4,055
Blue MedicareRx	\$1,057	\$0	(\$10)	\$1,067
Other Categories				
CBA	\$8,914	\$33	(\$43)	\$8,990
Host	\$1,918	\$0	(\$169)	\$2,087
HWP	\$266	\$0	\$0	\$266
Total	\$79,791	\$3,503	(\$3,502)	\$86,796

Notes:

(1) Sources: Commissions and Reclassification Items are from Internal BCBSVT reports. Reported Expenses are from Underwriting Results GAAP Basis, restated for the new allocation, for the Experience Base period.

(2) Reclassification Items include the removal of federal fees, GMCB billback, and fees paid to our vendor Health Equity for the administration of Health Savings Accounts and Health Reimbursement Accounts linked to our insurance products.

(3) Allocation of expenses for Cost Plus members with Med Supp coverage based on cost PMPM for insured Med Supp members. In GAAP financials, expenses are included in Large Group Cost Plus.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
ADMINISTRATIVE CHARGES DEVELOPMENT

EXHIBIT 5B

Administrative Charges PUPM

Unit		Account	Member	Contract	Invoice Counts	Medical Claim	Projected Claims	Large Group Subtotal	CP Medsup
Administrative Expenses	A	\$898,769	\$2,500,664	\$390,626	\$4,802	\$670,458	\$2,820,581	\$7,285,899	
Unit Months	B	721	153,676	81,861	1,108	144,172	77,209,066		
Expense PUPM	$C = A / B$	\$1,246.56	\$16.27	\$4.77	\$4.33	\$4.65			\$38.94
Increase for Membership	D	3.0%	3.0%	3.0%	3.0%	3.0%			3.0%
Updated Expense PUPM	$E = (1+D) \times C$	\$1,283.70	\$16.76	\$4.91	\$4.46	\$4.79	3.7%		\$40.10
Annual Trend	F	2.2%	2.2%	2.2%	2.2%	2.2%			2.2%
Monthly Trend Factor	$G = (1+F)^{(1/12)}$	1.0018	1.0018	1.0018	1.0018	1.0018			1.0018
Months of Trend to First Effective Period	H	25	25	25	25	25			25
Projection Periods									
Effective Date		Account	Member	Contract	Invoice Counts	Medical Claim	Projected Claims		
Jan-21	$I = E \times G^H$	\$1,343.70	\$17.54	\$5.14	\$4.67	\$5.01	3.7%		\$41.97

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

EXHIBIT 6A

MEMBER MONTHS FOR FULL CREDIBILITY BY POOLING POINT

Pooling Limit	Member Months
\$30,000	8,325
\$35,000	9,182
\$40,000	9,990
\$45,000	10,747
\$50,000	11,462
\$55,000	12,142
\$60,000	12,786
\$65,000	13,406
\$70,000	14,002
\$75,000	14,573
\$80,000	15,117
\$85,000	15,633
\$90,000	16,127
\$95,000	16,600
\$100,000	17,055
\$105,000	17,497
\$110,000	17,923
\$115,000	18,338
\$120,000	18,745
\$125,000	19,140
\$130,000	19,523
\$135,000	19,897
\$140,000	20,266
\$145,000	20,624
\$150,000	20,974
\$155,000	21,313
\$160,000	21,643
\$165,000	21,969
\$170,000	22,289
\$175,000	22,600
\$180,000	22,905
\$185,000	23,199
\$190,000	23,486
\$195,000	23,766
\$200,000	24,039
\$205,000	24,307
\$210,000	24,570
\$215,000	24,827
\$220,000	25,077
\$225,000	25,323
\$230,000	25,563
\$235,000	25,799
\$240,000	26,032
\$245,000	26,259
\$250,000	26,480
\$255,000	26,695
\$260,000	26,905
\$265,000	27,111
\$270,000	27,316
\$275,000	27,517
\$280,000	27,712
\$285,000	27,903
\$290,000	28,086
\$295,000	28,262
\$300,000	28,438

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

EXHIBIT 6B

POOLING POINT by MEMBERSHIP

Membership (Current Month)	Pooling Limit
0 to 299	\$70,000
300 to 499	\$90,000
500 to 999	\$110,000
1,000 to 1,499	\$145,000
1,500 to 1,999	\$170,000
2,000 to 2,499	\$190,000
2,500 to 2,999	\$215,000
3,000 to 3,999	\$235,000
4,000 to 4,999	\$275,000
5,000 to 7,499	\$300,000
7,500 to 9,999	\$350,000
10,000+	\$400,000

State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Note To Reviewer

Created By:

Matthew Goodrich on 05/19/2020 03:38 PM

Last Edited By:

Matthew Goodrich

Submitted On:

05/19/2020 03:39 PM

Subject:

Updated Filing Materials

Comments:

Please find attached materials incorporating the redactions noted in the Board's May 7, 2020 letter for the 2021 BCBSVT AHP Rating Program Filing.

Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Filing
Actuarial Memorandum

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Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Filing
Actuarial Memorandum

1. Purpose

Blue Cross and Blue Shield of Vermont (BCBSVT) performs association health plan (AHP) rating on a case-by-case basis. We accomplish rating through a formulaic approach that blends recent experience with a manual rate according to a credibility formula. We may adjust formula results for underwriting judgment and/or management decisions. This filing establishes the formula, manual rate, and accompanying factors that we will use to rate Pathway 1 AHPs beginning upon approval of this filing. The formula and factors in this filing apply to Pathway 1 AHPs only.

Once approved, we will use this filing for insured AHPs until superseded by a subsequent filing. In the event that we require factors with effective dates or experience periods beyond those explicitly presented in this filing, we will calculate appropriate factors using the same base data and methodology used in this filing. This filing will apply beginning with rates communicated within seven business days after the date of its approval and continuing until at most seven business days after the date of approval of the next BCBSVT AHP Filing. The term “communicated,” for this purpose, means a written proposal delivered to an association health plan account.

2. Overview and Rate Impact

2.1. Overview

This filing includes a description of the formula and the development of each of the factors used in it. We will describe in detail the formula used to develop rates. We will then detail the factors applicable to all insured AHPs. The factors in the build-up of the projected claims cost include the trend factors, benefit relativities, manual rate, and large claims factors. In addition to the projected claims cost, we will explain the calculation of administrative charges, the net cost of reinsurance, contribution to reserve, and state and federal assessments, all of which are included in the rate development.

2.2. Historical Financial Results

BCBSVT does not currently have any AHPs in its book of business. In 2019, BCBSVT had two AHPs, neither of which was a Pathway 1 AHP. The financial results of those AHPs are not relevant to this filing.

2.3. Impact of Formula and Factor Changes

This is the first formula and factor filing for Pathway 1 AHPs. We cannot measure any change from prior filings.

3. Formula Description

We develop rates for active and Medicare Primary subscribers separately based on their own experience. Both the formula and factors described in this filing are the same for both populations except where noted.

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Benefit-Adjusted Projected Single Claims Rate

Exhibit 1A contains a sample calculation of the benefit-adjusted single claims rate. Page 1 of the exhibit applies to active members and page 2 applies to Medicare Primary members. For each case, we start the rating with a twelve-month experience period with at least two months of runout¹. We determine a pooling point based on the size of the case at the end of the runout period and split the experience period claims (line A) into amounts above (line B) and below (referred to as capped claims, line C) the pooling point.

We apply completion factors (line D) developed from the monthly financial reporting process (best estimates before margin) to capped claims to produce completed capped claims (line E). We use the formula and factors described in Milliman's 2017 *Health Cost Guidelines - Reinsurance* to calculate expected claims above the pooling limit (line F). We add the expected claims above the pooling limit to the completed capped claims to produce large-claim-adjusted experience period claims. Medicare Primary members generally do not have claims near the association's pooling point, so we do not pool their claims. We then multiply the large-claim-adjusted experience claims by an adjustment factor (line G) to reflect structural changes between the experience period and the rating period. This adjustment modifies the experience to reflect such things as mandated benefit changes, contractual provision changes, etc., that, in the judgment of the underwriter, are necessary to make the experience appropriate for the estimation of the expected claims in the rating period. We divide the result (line H) by the number of member months during the experience period (line I) to produce the adjusted experience period claims per member per month (line J).

We then divide the adjusted experience period claims per member per month (PMPM) by a seasonally-adjusted benefit relativity value to neutralize any effect of seasonality and benefits on the paid claims. To determine this factor, we first determine a benefit relativity factor for each benefit plan (using the factors described in section 5) and contract tier type (single, 2-person, family, etc.). Based on the seasonal patterns observed as part of the reserving process for each calendar month, we determine seasonal factors for CDHPs and for non-CDHPs and normalize them so that they total to 12. We combine these factors to calculate seasonal benefit relativity factors for each combination of benefit plan, contract tier type, and month. We apply these factors to the number of contracts for each benefit plan, contract tier type, and month in the experience period. We total the results and divide the resultant sum by the number of member months in the experience period. We apply the seasonal factors regardless of the length of experience period, but if there is a 12-month experience period and there are no changes in benefits or enrollment, the normalization of the seasonality factors would cause the seasonal adjustment to be 1.000. This produces the average experience period seasonally-adjusted benefit relativity factor (line K).

We adjust for any change in the demographics of the association between the experience period and the rating period by calculating the average demographic factor for each period and applying the ratio of projection to experience (line L). We multiply the adjusted experience period claims PMPM (line J) by the demographic normalization factor and divide by the average experience period seasonally-adjusted benefit relativity factor (line K) to produce the benefit-adjusted experience period single claims rate (line M), which is the

¹ For first year renewals, where twelve months of experience is not available, we typically use claims incurred in nine months with no runout.

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expected cost for a single contract in the experience, neutral of benefit and seasonality. We then multiply this by a trend factor (line P, as calculated in section 4) to project the claims from the experience period to the rating period. We also multiply by a factor (line Q) to account for differences in contracted pharmacy discounts between the experience period and the projection period.

We blend the projected single contract rate (line R) with the adjusted manual rate (line S, as described in section 6.1) using the credibility formula described below.

We calculate the credibility factor (line T) as follows:

$$Credibility = \sqrt{\frac{Member\ Months}{Upper\ Bound}}$$

The pooling point determines the upper bound. We base the pooling limit on the association's membership in the current month. Please see the abbreviated table below for details. The underwriter may apply discretion in the event the current month's membership is not appropriate for determining a pooling limit (e.g. a significant change in enrollment of member groups).

Membership (Current Months)	Pooling Point	Upper Bound Member Months
Medicare Primary		8,325
0 to 299	\$70,000	14,002
300 to 499	\$90,000	16,127
500 to 999	\$110,000	17,923

If member months are greater than the upper bound, the credibility factor will be 1. Exhibit 6A provides a complete list of upper bound member months by pooling point, while Exhibit 6B details pooling points by current month membership.

To blend the projected single contract rate with the adjusted manual rate, we use the following equation:

$$Benefit-Adjusted\ Projected\ Single\ Claims\ Rate = Projected\ Single\ Contract\ Rate \times (Credibility) + Adjusted\ Manual\ Rate \times (1 - Credibility)$$

Multiple Experience Periods

BCBSVT uses multiple experience periods (when available) to develop the benefit-adjusted projected single claims rate. Following the methodology described above, we calculate an experience rate for the first and second year preceding the experience period. We then apply the credibility formula recursively to the residual portion of the rate. The table below provides a demonstration of the application of the credibility formula for an association with 50 percent credibility in each experience year.

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Experience Period	Proportion of Rate
YE 202006	50.0%
YE 201906	25.0%
YE 201806	12.5%
Manual Rate	12.5%

Three years of experience is the maximum that we will use. In the absence of extenuating circumstances, all renewals will use the maximum number of years available. In the event we do not consider historical experience appropriate or reliable for rating periods (e.g. a significant change in enrollment of member groups), the underwriter will use fewer years of experience and document the rationale for such a change.

Exhibit 1B provides a detailed sample calculation of the benefit-adjusted projected single claims rate using three years of experience.

If the credibility of the first year of experience is in excess of 66.67%, the underwriter shall develop rates using a 3-2-1 blend of experience periods and not utilize the manual rate.

Required premium by Plan, Tier Type

Exhibit 1C provides a sample calculation of premium. For each plan and contract tier type anticipated in the rating period, we calculate projected claims (line B1) as the product of the benefit-adjusted projected single claims rate (S) and the benefit relativity factor (as described in section 5) for the plan and contract tier (line A).

We use the members per contract tier during the last month of the runout period as the basis for the projected members per tier in the rating period. The underwriter will adjust this ratio if, in their opinion, the result is not representative of the expected values in the rating period.²

The calculation for the total required premium by (plan, tier) is as follows:

{ Projected Claims by Plan and Tier (line B1)	+
Expected Net Cost of Reinsurance (line B2, as described in section 6.4)	-
Projected Pharmacy Rebates (line B3, as described in section 6.5)	+
Administrative Charges (line D, as described in section 6.3)	+
State Mandates and Federal Assessments (line C1 to C4, as described in sections 6.7 and 6.8)	/
{ 1 - Contribution to Reserve (line F, as described in section 6.6) - Broker Commissions (line E)	=
Required Premium by Plan and Tier (line H)	

² E.g., the number of contracts in a particular tier may be small (or even 0). In such instances, the underwriter should use appropriate values based on total block of business or other appropriate source.

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Underwriting Judgment Adjustments

If, in the underwriter's professional judgment, the standard formula would not produce appropriate rates for the case being rated, the underwriter will make such modifications as needed to produce appropriate rates. The underwriter will document in the case file the reason(s) for the adjustment(s) and the method of determining the appropriate adjustment(s).

Management Discretionary Adjustments

For marketing or other reasons, management may decide to modify the rates on a specific case or block of cases. The underwriter will document in the case file the adjustment(s) made, along with a description of the nature of the adjustment(s).

4. Trend Factors

The source of data for trend development is BCBSVT's data warehouse, except where noted below. To ensure the accuracy of claims information, we reconcile the data used against internal reserving, enrollment, and other financial reports. The data includes claims from BCBSVT Cost Plus groups, BCBSVT ASO groups of under 5,000 members, BCBSVT insured large groups, BCBSVT insured small groups, BCBSVT insured association health plans, and TVHP insured large groups. The above lines of business cover substantially similar populations under similar benefit packages. Combining these homogeneous populations creates greater consistency and credibility within the trend factor development.

We exclude large ASO groups and ASO groups with special pricing arrangements. BCBSVT recently experienced large membership movement out of the small group market. Due to significant changes in membership, we exclude all membership from small groups that were not continuously with BCBSVT throughout the trend experience period. We exclude claims from Medicare Primary members. Medicare Primary trend is discussed in section 4.5. We exclude compounds from the pharmacy trend development.

We use claims incurred from November 1, 2015 to October 31, 2019, paid through December 31, 2019. We apply completion factors to estimate the ultimate incurred claims for each period shown in the exhibits.

4.1. Medical Trend Development

Medical trend is composed of three pieces: cost, utilization, and intensity. In our analysis, we combine utilization and intensity within the utilization metric and analyze the unit cost separately. For fee-for-service claims, we combine plan payment with member cost sharing to calculate the allowed charges. For claims under a capitation arrangement, we combine a fee-for-service equivalent amount with the member cost sharing to calculate allowed charges. We remove all claims from members who exceeded \$500,000 in paid medical claims in 12-month periods preceding October 31, 2019. As the utilization component includes intensity, high cost claimants can unduly impact the year-over-year, time series, and regression calculations. We exclude pharmaceuticals processed through the medical benefit from the unit cost and utilization trend and develop a pure premium trend for those claims.

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4.1.1. Unit Cost

Observations of recent contracting and provider budgetary changes are the main source of unit cost trends. During the year ended October 2019, roughly 52 percent of total claims dollars were provided by Vermont facilities and providers directly affected by the hospital budget review process of the Green Mountain Care Board (GMCB). For hospitals under the jurisdiction of GMCB review, we start with the assumption that the GMCB will approve hospital budgets for October 1, 2020 and October 1, 2021 that support identical commercial increases as those approved for October 1, 2019. Inasmuch as expenses at Vermont hospitals exceeded budgeted amounts, we anticipate unit cost changes beginning in October 2020 will exceed those approved in 2019. To adjust for the anticipated increase in unit cost changes, we increase the unit cost change at each facility by 2.1 percentage points, which is the increase in operating expenses rebased for the overall change in net patient revenue for the total of all facilities subject to GMCB review. We assume increases effective October 1, 2021 will return to historical levels; that is, identical to the increases approved for October 1, 2019. Similarly, we assume for other providers within the BCBSVT service area that overall 2020 and 2021 budget increases will be identical to those implemented during calendar year 2019. In certain cases, we augment the most recent increase with market intelligence the provider contracting department has gathered relative to early indications as to potential variations in upcoming budgets.

The provider contracting and actuarial departments worked together to assess the impact these increases would have on contracts for BCBSVT Managed Care and BCBSVT Non-Managed Care contracts. For marketing reasons, provider contracting negotiates different unit cost increases for each of the two contracts. To reflect this, we calculate a different cost trend for each contract. Finally, we derive unit cost increases for providers outside the BCBSVT service area from the Fall 2019 Blue Trend Survey, which is a proprietary and confidential dissemination of the BlueCross BlueShield Association.

We normalize claims to the October 2019 contract at each unique provider by applying a factor equal to the product of the impact of each contracting change from the experience month through October 2019. We assume that the derived trend for other claims increases monthly on a continuous basis. Exhibit 2A displays an illustration of this approach.

We use the expected increases to trend the contract-normalized claims to the projection period. The unit cost trend is the ratio of claims for the year ending December 2021 to claims for the year ending June 2020, converted to an annual factor.

The chart below summarizes the results of the analysis:

Medical Unit Cost Trend		
	BCBSVT Managed Care	BCBSVT Non- Managed Care
Vermont facilities and providers impacted by GMCB's Hospital Budget Review	5.3%	5.2%
Other facilities and providers	3.6%	3.6%
Total	4.4%	4.3%

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4.1.2. Utilization & Intensity

To examine historical utilization trend patterns, we first normalize claims for unit cost increases. We measure contract changes for the entirety of the experience period explicitly for each facility within our service area as well as the three largest physician groups.

We measure increases for fee schedules and other chargemasters by applying each schedule to a market basket of services. The market basket is defined by using Current Procedural Terminology (CPT) codes and CPT modifier combinations that are present in each of the effective periods the schedules covered. Using the same experience period data used throughout the trend analysis, we compare total allowed costs for the selected CPT and CPT modifier combinations under each schedule to estimate the percentage increase. For contracts under Diagnosis Related Group (DRG) arrangements, we compare the charge for the 1.000 DRG service for each period. Finally, for services under a discount-off-charge arrangement, we use the contracted chargemaster increase provided by our provider contracting department. Similarly, we normalize all local independent lab claims to the lab benefit manager fee schedule in effect on October 31, 2019.

This accounts for 82 percent of allowed claims dollars during the experience period. Costs for other claims are primarily for out-of-area services. We derive contracting changes for these claims from the Fall 2019 Blue Trend Survey, which is a proprietary and confidential dissemination of the BlueCross BlueShield Association.

We also normalize for changes in demographics and normalize each month to the average number of working days in the year ended October 2019, as defined by our reserving models. Exhibit 2B, Page 1 shows the resulting array of allowed PMPM claims costs, before and after normalization for contract changes. We perform regressions and time series on monthly PMPM costs. We also calculate a year-over-year rolling-12 PMPM utilization trend of 2.5 percent for the year ended October 2019. We provide the regression and time series calculations in Exhibit 2B, pages 2 to 10. We do not include certain time series methods, such as those assuming no trend or those for which there is not sufficient historical data³, as these are inappropriate for use in trend development and/or for the data available.

We select a utilization trend of 2.5 percent for facility claims and 1.0 percent for professional claims. The total trend produced from these components is in line with the trends from measures that combine all medical services and informs our selection of an overall utilization trend of 2.0 percent.

Analysis that was performed subsequent to the assembly of this filing suggests that our 2020 to 2021 professional utilization trend may be understated. We will continue to assess the impact of this new analysis on the association health plan market, but in the interest of timely having approved factors for January 1, 2021 rating we felt compelled to submit this filing as-is. In the event that we believe that a material change is warranted, we will discuss appropriate steps with the GMCB.

³ The seasonal additive, seasonal multiplicative, single moving average, and single exponential smoothing methods are not used since they assume no trend. The double moving average method is not used due to insufficient historical data.

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These selections represent an adequate, yet not excessive, estimation of future utilization trend for this population.

4.1.3. Pharmaceuticals

The recent acceleration in cost for pharmaceuticals processed through the medical benefit warrants a separate analysis for these claims. The accelerating cost for these drugs may unduly affect utilization trend, so we consider it more appropriate to develop a discrete trend for these claims. Exhibit 2B, page 11 shows the historical allowed claims for this category. We select an 11.3 percent trend, the year-over-year pure premium trend, on pharmacy claims processed through the medical benefit.

4.1.4. Induced Utilization

Given that the impact of induced utilization has been minimal over the past few years, we continue to not make an adjustment to utilization trend. Exhibit 2C shows the historical paid-to-allowed ratio of claims in the trend experience base.

We discuss the concept of induced utilization further in section 5.1.

4.1.5. Total Medical Trend

The total medical trend factors are the product of the utilization trend and the unit cost trend factors.

Medical Trend - BCBSVT Managed Care				
Category	Facility	Professional	Pharmaceuticals	Total
Unit Cost	5.2%	2.6%	11.3%	
Utilization	2.5%	1.0%		
Total Medical Trend	7.8%	3.6%	11.3%	7.0%

Component	BCBSVT Managed Care	BCBSVT Non-Managed Care
Total Medical Trend	7.0%	6.9%

To calculate the overall medical total trend to be applied in the renewal formula, we trend the manual rate (see section 6.1) experience medical claims based on the network to calendar year 2021. We then divide the projected claims cost by the experience claims cost to calculate the overall medical trend.

Total Allowed Medical Trend				
Network	BCBSVT Managed Care	BCBSVT Non-Managed Care	TVHP Managed Care	Total
Experience Allowed Claims (Medical Only)	\$63,880,865	\$38,473,963	\$8,879,757	\$111,234,584
Trend Factors for 24 months	1.145844	1.143715	1.145379 ⁴	
Trended Claims	\$73,197,486	\$44,003,232	\$10,170,685	\$127,371,403
Annual Trend				7.0%

⁴ From Q3 2020 TVHP Large Group Rating Program filing (BCVT-132350492)

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4.2. Retail Pharmacy Trend

ESI has been the pharmacy benefits manager for BCBSVT since July 2009. The initial ESI contract was for a period of three years; new contracts became effective July 2012, July 2015, and January 2018. We base our cost trend calculation on Average Wholesale Price (AWP) and apply a factor in the rating formula to account for the contracting changes. We analyze the components of trend (cost and utilization) separately for brand and generic drugs. We estimate the impact of brand drugs going generic based on the brand drugs that are scheduled to lose patent in the projection period. Specialty drugs are very high cost drugs with low utilization. Because of their relative infrequency, we consider it more appropriate to look at the overall PMPM trends for these drugs rather than separate cost and utilization components. We calculate the overall pharmacy trend by combining the separate projections.

Non-Specialty Drug Utilization

Exhibit 2D provides the monthly and the 12-month rolling data, along with the corresponding year-over-year and exponential regression trends, for non-specialty drugs. There are separate developments for the generic cost, brand cost, and overall non-specialty utilization categories. We use the number of days supply in the utilization development, rather than the number of scripts, to normalize for changes in the days supply per script (e.g. increased use of 90-day fills). Because there are several popular brand drugs that have become generic during the experience period, or will become generic during the projection period, we combine the data for generic and brand drugs for the purpose of analyzing utilization patterns. We exclude vaccines from the non-specialty utilization calculation.

The regressions use 24 data points to best capture an adequate amount of the most recent history of drug costs. Though the regressions calculate positive trends, non-specialty drug utilization has oscillated around a single 30-day supply per member for a number of years, so we select a 0.0 percent non-specialty utilization trend.

Generic Cost Trend

To ensure that the generic cost trend is not skewed by the arrival of new generic drugs, we perform regressions on monthly Average Wholesale Price (AWP) per days supply on only those generic drugs that have been in the market for more than 36 months.

Brands that are going generic will be subject to the generic discounts. We do not expect that the AWP for these drugs will significantly change from the experience period due to the lack of generic competition for the main drugs in this category. We adjust the price to reflect the different experienced effective discounts between brands and generics.

Exhibit 2D, page 1, shows monthly cost per day supply and the 24-month regressions.

We select an annual trend of 0.0 percent for generic cost trend. Though the AWP trend has increased in recent months, we consider a 0.0 percent to be a reasonable long-term outlook for generic cost trend.

Brand Cost Trend

We perform a 24-month regression on monthly AWP cost per day supply for brand drugs and select the 24-month regression result of 8.6 percent for the brand cost trend. This result is

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consistent with recent filings, and we consider it to be an adequate, yet not excessive, outlook of future trends.

Specialty Drugs

In previous filings, the introduction of certain new specialty drugs required an adjustment to the specialty drug trend calculation. The impact of excluding certain specialty drugs has had an increasingly small impact on specialty trend. Therefore, we combine all specialty drugs to develop trend. We will continue to monitor new specialty drugs and adjust our methodology as necessary.

Exhibit 2E shows the calculation of specialty trend for all specialty drugs. We select a 19.0 percent specialty trend, which is the trend produced by a 24-month regression on monthly cost. For our regressions, we chose 24 points of monthly data to best capture the most recent history of drug costs.

Total Pharmacy Trend

Instead of explicitly projecting a generic dispensing rate, we separate the drugs into six categories:

- Generics: Drugs that have been generic since at least October 2016
- New generics: Generic drugs that have been on the market for fewer than 36 months (November 2016 to October 2019)
- Brands going Generic: brands that we expect to become available in generic form in the projection period, based on a list from our pharmacy benefit manager
- Vaccines
- Over the Counter (OTC)
- Compounds
- All other Brands

As shown in Exhibit 2F, we trend each category days supply forward at the same rate of 0.0 percent. Exhibit 2F summarizes the trends for non-specialty drugs and calculates the total non-specialty allowed drug trend as 2.8 percent.

Using the PMPM claims as weights between non-specialty and specialty claims for the 12 months ended October 2019, we apply the annual trends for 26 months and calculate the following:

Allowed Pharmacy Trend	
Category	Annual Trend
Generic	0.0%
Brand	8.6%
Brands Going Generic	-51.0%
Specialty	19.0%

Please note that we apply contract changes separately from trend in order to accurately capture the timing for each renewal.

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Contract Adjustment Factors

For drug claims in the year ended October 31, 2019, we use the AWP of the claims and apply the contracted discounts and dispensing fees, as applicable, for each potential renewal experience period and rating period to calculate adjusted allowed charges. The contract adjustment factor for each experience and rating period combination is the ratio of the adjusted allowed charges.

Applying the discount adjustment from the experience used to develop trend to a 12-month rating period beginning January 2021, we calculate a 10.5 percent effective annual trend.

Exhibit 3J contains the contract adjustment factors that we will apply to the drug claims in an association's renewal. These factors assume that both the experience period and rating period are 12 months. For cases where this is not true, or for periods not provided in the exhibit, we will calculate an appropriate factor using an analogous methodology.

4.3. Overall Total Trend

Using the year ended December 2019 claims experience for the groups included in the manual rate (see section 6.1), we calculate the overall allowed trend as follows:

Category	Allowed PMPM	Allowed Trend
Medical	\$ 518.99	7.0%
Pharmacy	\$ 119.50	
Total	\$ 638.49	⁵

4.4. Leveraged Trends

We will use the leverage formulas from the Q3 2019 Large Group Filing. The formulas for leverage are below:

Leverage Formulas	
Medical	$-0.0385 \times (AV) + 1.0389$
Drug Card	$-0.0680 \times (AV) + 1.0691$
Drug - CDHP 100% Wellness	$-0.0559 \times (AV) + 1.0564$
Drug - All Other CDHP	$-0.0723 \times (AV) + 1.0722$

Exhibits 3H and 3I provide examples of leverage factors.

Applying the leverage factors for benefits present in the year ended December 2019 for the groups included in the manual rate, we calculate the following paid trends:

Category	Paid PMPM	Paid Trend
Medical	\$ 419.35	7.8%
Pharmacy	\$ 107.06	
Total	\$ 526.41	⁶

⁵ The allowed trend with the pharmacy contract adjustment is 7.7%.

⁶ The paid trend with the pharmacy contract adjustment is 8.5%.

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4.5. Medicare Secondary Trends

Medicare Secondary plans cover two categories of services: Medicare-covered services which are subject to member cost share (deductible/coinsurance) and services which are not covered by Medicare. We do not adjust services subject to Medicare cost sharing for network, as Medicare sets the allowed charges, whereas we do adjust the services not covered by Medicare using the contract factors described above to bring all charges to a single network.

For Medicare claims, we develop cost trends for the different types of service using trends from CMS⁷. We assume increases for 2021 will be the same as the 2020 increases. Consistent with previous filings, we assume a 0.0 percent utilization trend for Medicare claims.

Category	Allowed Trend
Inpatient	4.1%
Outpatient	3.3%
Professional	0.0%

The trends used for services not covered by Medicare are the same as the trends developed for use with active benefits. We use the same pharmacy trends for Medicare Secondary plans as we use for active plans.

5. Benefit Factors

To determine standardized claims rate relationships, also called relativities, BCBSVT creates models that simulate the impact of member benefits for all types of plans. The models determine the allowed charges for the 12 months of claims included in the study and “re-adjudicate” the claims, thereby simulating the impact of member cost sharing for a given benefit plan.

The claims data used in the models is from BCBSVT’s data warehouse. To ensure accuracy, the claims data has been reconciled against internal reserving, enrollment and other financial reports. The starting point of the analysis is allowed charges as determined by the BCBSVT claims adjudication system. The claims data includes benefit codes that enable us to identify the services and benefit structures (copays, deductibles, and coinsurance) for each claim.

The models use incurred allowed charges from January 2018 to December 2018, paid through December 2019. We trend the allowed charges 36 months to the 12-month period that begins January 1, 2021.

The data includes claims from BCBSVT Cost Plus groups, BCBSVT ASO groups, BCBSVT insured large groups, BCBSVT insured small groups, and TVHP insured large groups. Combining these homogeneous populations creates greater consistency and credibility within the relativity factor development. We combine CDHP and non-CDHP claims. We exclude claims from certain large ASO groups, as the rich benefits offered by those groups are not in line with the leaner offerings of most associations. We also exclude groups that have special benefits. This predominantly refers to groups that have specific reimbursement with particular providers

⁷ <https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/FFS-Trends-2018-2020.pdf>

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outside of BCBSVT's contracts and/or claims processing function. We exclude claims from groups that do not have pharmacy coverage through BCBSVT. We create separate models for active members and Medicare Primary members.

For each benefit plan, the models produce the simulated PMPM values of the benefits. We divide the PMPM for each plan by the average trended paid claims rate from the BRV experience period to produce its benefit relativity (BRV). We calculate relativities for medical only plans, Rx only plans, and integrated CDHP plans for both active employees and Medicare Primary employees.

5.1. Models for Active Employees

Benefit Relativity Model: Medical

We use the total medical trend by type of service to project to the rating period. We calculate cost trends for each type of service using the discrete unit cost trend method above, while applying the separate utilization trends developed for facility and professional services (see section 4.1.2).

Using the contracted reimbursement schedules, we calculate network factors that represent the different network contracts. Using these factors, we can include all claims in each of the three networks by adjusting each claim to the basis of a single network. This enables us to combine all the experience for each plan design.

We categorize claims according to how benefits are paid and generate one record for each member, date of service, and type of service. We assign each record a cost share (deductible/coinsurance, copay, covered in full) for each plan modeled. For all products, we assign claims for preventive mandated benefits a "covered in full" cost share independently of the product that is being modeled.

The model tests one benefit design at a time. It determines the member portion of the allowed charges, and from this, a total simulated paid PMPM for each benefit design. The model considers the impact of copay, deductible, coinsurance, out-of-pocket maximum, and preventive mandated benefits. If the average allowed cost of a category is less than the assigned copay, we assume that the member paid the full cost of the service.

BCBSVT offers products on several different networks based on the two provider contracts (BCBSVT Managed Care and BCBSVT Non-Managed Care). Depending on the network, there may be more than one tier of coverage (generally referred to as in-network and out-of-network) and different networks may have different providers in each tier. Below is a chart showing which providers are in which tiers on many of BCBSVT's common networks. Providers who accept the indicated provider contract are considered to be in-network. For providers in the BlueCard® network and non-participating providers, 'In' indicates coverage for these providers on the in-network tier of coverage, and 'Out' indicates coverage for these providers on the out-of-network tier of coverage.

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Network Name	Provider Contract	BlueCard Providers	Non-Participating Providers
VHP Select	BCBSVT Managed Care	N/A	N/A
VHP	BCBSVT Managed Care	Out	Out
EPO PCP	BCBSVT Managed Care	In	N/A
VHP Open Access	BCBSVT Managed Care	In	Out
EPO	BCBSVT Non-Managed Care	In	N/A
PPO	BCBSVT Non-Managed Care	In	Out
Indemnity	BCBSVT Non-Managed Care	In	In

If BCBSVT were to quote a product not on one of the networks listed above, or one featuring different provider networks for selected services, we would modify the base data in the BRV models to correspond to the desired changes (for example, excluding certain providers or modifying allowed amounts) before simulating the benefit impact.

We use BRVs in two places in the rating formula described in Section 3. We calculate the average experience period seasonally-adjusted benefit relativity factor (line K in Exhibit 1A) using BRVs for the benefits in the experience period and the projected claims for the rating period (line B1 in Exhibit 1C) using BRVs for the benefits in the rating period.

Exhibits 3A and 3B display the relativities for active employees for some medical products currently in our insured large group book of business.

Benefit Induced Utilization: Medical

We use factors for the impact of induced utilization (IU) developed by the federal Department of Health and Human Services (HHS) for use with Qualified Health Plans, to which we found the curve of best fit $IU = AV^2 - AV + 1.24$, where AV is the actuarial value of the benefit plan. HHS created their IU factors for combined medical/pharmacy AV, but as we develop BRVs separately for medical and pharmacy plans, we will apply the formula to medical-only AVs. We normalize the curve such that the average AV underlying the base BRV experience period returns a utilization adjustment of 1.00. In other words, if a simulated benefit has an AV less than the average AV, then utilization will be reduced (i.e. factor < 1.00). If a simulated benefit has an AV greater than the average AV, then the benefit will have induced utilization (i.e. factor > 1.00).

Benefit Relativity Model: Pharmacy

We use the total trend, by type of drug, for brand, generic, and specialty drugs as described above (section 4.2) to project to the rating period.

Within the model, we assign all pharmacy scripts, including specialty, to one of six categories: retail generic, retail preferred brand, retail non-preferred brand, mail generic, mail preferred brand, and mail non-preferred brand. We apply flags to identify several categories of drugs that are either required to be covered in full (ACA contraceptives and vaccines) or for which an association may purchase a rider to offer additional coverage (some fertility drugs) or exclusion (lifestyle drugs). We also flag drugs for which an association may offer special cost-sharing arrangements, such as diabetic medications and wellness drugs. We assign these flags by National Drug Codes as reported to us by ESI.

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We adjust the experience period data to reflect the major brands that are expected to become generic between 2018 and 2021. The list comes from a report provided by ESI.

For these brands, in the first six months (the exclusivity period), we reduce the Average Wholesale Price (AWP) by 10 percent and keep the brand discount. For the months after the exclusivity period, we reduce the AWP by 10 percent and change the discount to the generic discount. The 10 percent reduction in AWP is based on industry standard assumptions, supported by our own analysis of AWP changes for drugs that have moved from brand to generic over the past several years.

We generate one record for each member and date of service combination. One record can have more than one script category. The model tests one benefit design at a time. It determines the member portion of the allowed charges and a total simulated paid PMPM for each benefit design. The model considers the impact of the deductible, coinsurance, copays and out-of-pocket maximum (OOPM). Following the ACA, the model excludes contraceptives and vaccines from the cost sharing. If the average allowed cost of a category is less than the applied copay, we assume that the member pays only the full cost of the script. With Vermont Act 171, all pharmacy benefits effective January 1, 2020 or later will have an OOPM of \$1,400. It is possible that this limit will increase effective January 1, 2021, following the IRS rules for Health Savings Accounts and High Deductible Health Plans. The exhibits include the \$1,400 OOPM on pharmacy benefits.

Exhibit 3D displays the relativities for active employees for some pharmacy products currently in our insured large group book of business.

Benefit Induced Utilization: Pharmacy

We performed an independent analysis to measure the correlation between the benefit design and the quantity of pharmacy prescriptions consumed. We adjust the pharmacy benefits in two ways. First, the generic utilization varies with the benefit design. We use claims and membership data from January 2016 through September 2019 to create a table to adjust the base generic utilization up or down depending on the difference in the generic and brand copays of the member's drug plan.

Second, we perform a separate analysis to adjust for the overall pharmacy benefit. We assign a modeled actuarial value to every benefit in the experience period. The correlation uses the actuarial value as the independent variable and days supply as the dependent variable. A linear equation best fits the data. We normalize the curve such that the actuarial value underlying the base BRV benefit returns a utilization adjustment of 1.00. The resulting formula is [REDACTED]

Although we use two steps to calculate the induced utilization, we are not adjusting the data twice. The adjustment for difference in generic/brand copays changes the mixture of scripts (i.e. generic dispensing rate) without adjusting the overall frequency of scripts. The richness or leanness of the plan, as measured by the actuarial value, drives an adjustment to the overall frequency of scripts without changing the mixture of scripts.

As the model includes claims from both CDHPs and drug cards, we also adjust for the type of benefit being modeled. Claims incurred on a CDHP have a lower cost per script than claims incurred on a drug card. We calculate a factor for each benefit type by taking the ratio of the

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cost per script for that type and the cost per script from all claims in the model. For CDHPs,

Benefit Relativity Model: Integrated (CDHP)

The CDHP model combines both the medical and pharmacy models described above. There is one record for each member, date of service and type of service combination. The model calculates separate medical and pharmacy actuarial values and makes the appropriate utilization adjustment for each.

Exhibit 3C displays the relativities for active employees for some CDHP products currently in our insured large group book of business.

5.2. Tier Factors

Each BRV model generates a BRV for different contract tiers as well as the overall PMPM described in the sections above. The models perform this calculation by readjudicating claims across families in addition to member-based readjudication. We use the tiered BRVs to calculate the average BRV for both experience and rating benefits.

We use the same tier factors developed in the Q3 2019 Large Group filing to spread the required premium across tiers. Exhibit 3K displays these factors.

5.3. Models For Age 65+ Medicare Secondary Plans

Benefit Relativity Model: Medical

Medicare Primary rate tiers are only available on the BCBSVT Non-Managed Care network. To develop benefit relativity values for Medicare Secondary plans, we use the same method as we do for the active factors. For the claims base, we use allowed charges incurred between January 2018 and December 2018, paid through December 2019, for members whose primary insurance is Medicare. Given the scarcity of Medicare Primary members in the BRV experience (fewer than 1,000 member months), we also include Medicare Primary members from groups who we exclude from the development of the active BRVs (large ASO groups).

Medicare Secondary plans cover two categories of services: Medicare-covered services which are subject to member cost share (deductible/coinsurance) and services which are not covered by Medicare. We do not adjust services subject to Medicare cost sharing for network, as Medicare determines the allowed charges, whereas we adjust the services not covered by Medicare using the contract factors described above to bring all charges to a single network.

We trend the allowed charges to the 12-month period that begins January 1, 2021. We use the total medical trend by type of service as described in section 4.5.

As with the active benefits, the model simulates the effects of a benefit design on the trended allowed charges and calculates a simulated paid PMPM. The model divides this paid PMPM by the Medicare Primary manual rate (without the adjustment for changes to the pharmacy contract) to produce the benefit relativity value. Unlike the active benefits, we do not make an adjustment for induced utilization due to the richness of the benefit. As Medicare is the primary insurance for these plans and Medicare-covered claims make up 85

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percent of the trended allowed charges, we do not believe that the richness of the secondary insurance will have any influence on utilization.

Exhibit 3E displays the relativities for some Medicare Secondary medical products currently in our insured large group book of business.

Benefit Relativity Model: Pharmacy

To calculate relativities for pharmacy benefits for plans that are secondary to Medicare, we use allowed charges incurred between January 2018 and December 2018, paid through December 2019, for members whose primary insurance is Medicare (including members in large ASO groups, as with the medical experience). We trend the allowed charges to the 12-month period that begins January 1, 2021 using the same trends as used for active members. We assign pharmacy scripts to the same categories as for the active members and adjust allowed charges for brands going generic between the experience period and the rating period. The model produces a simulated paid PMPM for each benefit design and adjusts for the impact of induced utilization on the mixture and frequency of scripts as described for the active relativities above. We divide the adjusted paid PMPM by the Medicare Primary manual rate (without the adjustment for changes to the pharmacy contract) to produce the relativity.

Exhibit 3G displays the relativities for some Medicare Secondary pharmacy products currently in our insured large group book of business.

Benefit Relativity Model: Integrated (CDHP)

The Medicare Secondary CDHP model combines both the medical and pharmacy Medicare Secondary models described above. We create one record for each member, date of service, and type of service combination. The model calculates separate medical and pharmacy actuarial values and makes the appropriate utilization adjustments for each.

Exhibit 3F displays the relativities for some Medicare Secondary CDHP products currently in our insured large group book of business.

5.4. Formulary & Pharmacy Options

BCBSVT offers associations a selection of formularies. Associations can select either the BCBSVT Open Formulary or the National Performance Formulary. Associations electing the National Performance Formulary receive greater rebates than those on the BCBSVT Open Formulary. To calculate the impact of the change, we identify rebate-eligible claims for the groups impacted by the Q3 2020 Large Group filing. We calculate rebate totals under the contracted terms of each formulary. For associations changing formularies, we apply the below factors to projected rebates. We adjust the factors proportionately if the experience period includes a mix of formularies.

Experience Formulary	Rating Formulary	Rebate Multiplier
BCBSVT Open Formulary	National Performance Formulary	██████
National Performance Formulary	BCBSVT Open Formulary	██████

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BCBSVT offers associations an Active Choice pharmacy program. This program requires an active choice regarding the way members obtain their maintenance prescription drugs. For associations electing this program, we decrease simulated paid pharmacy claims in the BRV calculation [REDACTED].

BCBSVT offers associations an Express Scripts Specialty Pharmacy Exclusive option. Associations electing this option receive greater discounts and rebates on specialty drugs. We calculate pharmacy contract factors for this option using an analogous method to the standard contract factors, as described in Section 4.2. Exhibit 3J Page 2 provides the discount factors for the Express Scripts Specialty Pharmacy Exclusive option. The factors below apply to the projected rebates. We develop the factors assuming the entirety of the experience period is on the non-exclusive specialty option and the entirety of the rating period is Express Scripts Specialty Pharmacy Exclusive option. For associations with a mix of specialty options in their experience period, we adjust the factors using an analogous methodology proportionately to the programs in effect.

Formulary	Specialty	Rebate Multiplier
BCBSVT Open Formulary	Express Scripts Specialty Pharmacy Exclusive	[REDACTED]
National Performance Formulary	Express Scripts Specialty Pharmacy Exclusive	[REDACTED]

5.5. Riders

BCBSVT files riders with the Vermont Department of Financial Regulation (DFR) that allow AHPs to add or modify covered services. These riders include, but are not limited to, the Benefit Enhancement Rider, Acupuncture Benefits Rider, and Wellness Drug Rider. For riders that modify covered services, we use the benefit relativity model to price the rider. For riders that cover an optional service, we develop allowed charges from groups offering that coverage and adjust to the association's benefit, or use a reasonable approximation of allowed charges if no experience data exists. If, in the underwriter's professional judgment, the election of a rider will create material anti-selection, the underwriter will modify the rate as necessary using underwriting judgment, as described in section 3.

6. Other Factors Applicable to All Association Health Plans

6.1. Manual Rate

The manual rate for active members is the paid claims PMPM incurred between January 1, 2019 and December 31, 2019 and paid through February 29, 2020 from BCBSVT insured large groups, BCBSVT Cost Plus groups, TVHP insured large groups, BCBSVT insured association health plan member groups, and BCBSVT insured small groups. We only include in the manual rate experience period BCBSVT insured association health plans and BCBSVT insured small groups where the average number of monthly subscribers exceeded 25, and where the group had active enrollment throughout the manual rate experience period. We consider the above lines of business to be representative of the expected association health plans to be covered under this filing. We trend the experience to calendar year 2021 using the trends and

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pharmacy contract adjustments described in section 4. We cap claims at \$400,000⁸ and add expected claims between \$400,000 and \$1,000,000 (the expected corporate reinsurance attachment point). We calculate the expected large claims using the method described in section 6.2.

We calculate a separate manual rate for Medicare Primary members using the paid claims PMPM from the BRV experience period, which includes Medicare Primary members from ASO groups as well as large groups, trended to calendar year 2021 using the Medicare Primary trends described in section 4.5 and the pharmacy contract adjustments described in section 4.2. We make no adjustments to the Medicare Primary manual rate for large claims.

Calculation of the Manual Rate (Actives)		
Incurred and Paid Experience Paid Claims, capped at \$400,000	A	\$111,400,843
Estimated IBNR	B	\$817,150
Expected Claims between \$400,000 and \$1,000,000	C	\$112,21793
Overall Paid Trend factor (8.6% for 24 months) ⁹	D	1.17869
Projected Total Paid Claims	$E = (A + B + C) \times D$	\$64,879,639
Total Member Months	F	213,895
Manual Rate	$G = E / F$	\$632.81

Calculation of the Manual Rate (Medicare Primary)		
BRV Experience Paid Claims	A	\$ 34,070,146
Overall Paid Trend factor (5.9% for 36 months)	B ₁	1.1869
Pharmacy Contract Adjustment ¹⁰	B ₂	0.9939
Projected Total Paid Claims	$C = A \times B_1 \times B_2$	\$ 40,191,294
Total Member Months	D	94,703
Manual Rate	$E = C / D$	\$ 424.39

As noted in section 5.3 above, we use a version of the Medicare Primary manual rate without the pharmacy contract adjustment as the denominator of the relativity calculation. Per the above calculation, this value is \$426.98. We multiply the benefit relativity by the manual rate to calculate projected manual claims. If both the denominator of the relativity and the manual rate were to include the pharmacy contract adjustment, they would cancel in the multiplication and the projected claims would not reflect the discounts in the new pharmacy contract.

We adjust the manual rate to reflect an association's particular characteristics, as demonstrated in Exhibit 4A. We make an adjustment for the average age/gender factor (line B) of the association. For active and Medicare primary members, we use factors from the SOA's report *Health Care Costs - From Birth to Death*¹¹. We normalize the factors such that

⁸ Selected using the current membership and the table in Exhibit 6B.

⁹ Includes the impact of the pharmacy contract adjustment.

¹⁰ This adjustment is applied proportionately based on Medicare Primary membership with pharmacy coverage

¹¹ <https://www.soa.org/Research/Research-Projects/Health/research-health-care-birth-death.aspx>
The factors for the age curve are in Chart 1 (for actives) and Chart 21 (for Medicare Primary) of the databook linked on the page

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the membership in the manual rate experience period has an age/gender factor of one. We assign an industry factor (line C) to an association based on the Standard Industrial Classification code. See Exhibit 4B for the schedule of industry factors. We normalize the industry factors such that the manual rate has a factor of one. We do not apply an industry adjustment to the manual rate for Medicare Primary members. We then multiply the manual rate by an adjustment factor to reflect structural changes between the experience period to the rating period. This adjustment modifies the manual claims to reflect such things as mandated benefit changes, contractual provision changes, etc., that, in the judgment of the underwriter, are necessary to make the manual rate appropriate for the estimation of the expected claims in the rating period.

Finally, we calculate a contract conversion factor (line D) based on member distribution and tier factors in order to convert from a PMPM to a single rate basis. This factor is necessary because the rating formula blends the adjusted manual rate (line S of Exhibit 1A) with the projected single contract rate (line R of Exhibit 1A), which is not on a PMPM basis.

6.2. Large Claims Factors

BCBSVT uses the formula and factors in Milliman's 2017 *Health Cost Guidelines - Reinsurance* to calculate expected claims above the pooling limit. The contents of the *Guidelines* are proprietary and confidential. This filing provides a general description of the formula but will not include any of the factors.

The formula develops expected claim costs above a particular pooling point separately for children and adults on a PMPM basis. The basis for each rate is a starting claim cost that varies with the pooling point and the out-of-pocket limit for the benefit. Milliman calculates the starting claim costs using national data and the formula applies factors to adjust to our Vermont service area and the details of our contracts with local providers. The formula applies an adjustment for demographics and a trend factor to adjust the starting claim costs for the experience period of the renewal. There are also adjustments to the starting claim costs for the network of the benefit to account for claims from out-of-network providers, if appropriate for the benefit.

We multiply the adjusted adult and child claims rates by benefit by the number of adult and child member months in the experience for that benefit to develop the total expected claims above the pooling level.

6.3. Administrative Charges

The sources of administrative expense data in this filing are BCBSVT's data warehouse and accounting records. The experience period for this filing is January 2019 to November 2019. We use actual BCBSVT and TVHP administrative expenses for the experience period on a GAAP reporting basis as a proxy for administrative expenses for AHPs. Exhibit 5A provides a reconciliation of the experience period to restated GAAP financial report data.

Experience Base of Actual Expenses

BCBSVT's cost accounting system allocates administrative expenses to lines of business. We use BCBSVT insured large group and TVHP insured large group information for the base administrative charges.

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We allocate the cost accounting data by cost center into cost categories for purposes of determining administrative charges for each specific group account, given that account's characteristics.¹² The group cost categories align with the rules used in the cost allocation model. The group cost categories include:

Account – those expenses that the system allocates to specific group accounts on a per group account basis.

Member – those expenses that the system allocates on a per member basis.

Contract – those expenses that the system allocates on a per contract (subscriber) basis.

Medical Claims – those expenses that the system allocates on a per medical claim basis.

Invoice – those expenses that the system allocates on a per invoice basis.

Total Projected Claims – overhead expenses that we allocate using experience paid claims.

For each of the group cost categories described above, we tabulate the respective number of unit months during the experience period for BCBSVT and TVHP insured large groups. We combine these segments in this filing for marketing considerations. The unit months include the number of account months, number of member months, number of contract months, and number of medical claims and invoices by month. For overhead expenses, we divide the experience administrative charges by experience paid claims to calculate a percent of claims factor.

Exhibit 5A reflects reclassifications of the base data, including the removal of federal fees (we add these to premium rates separately; see section 6.8), GMCB billback (we add these to premium rates separately; see section 6.7), and fees paid to our vendor Health Equity for the administration of Health Savings Accounts and Health Reimbursement Accounts linked to our insurance products (participation in this service is optional and we assign these fees to associations who select the service). We also remove any expenses incurred due to one-time, non-recurring events, as these fees are not expected to continue to occur in the projection period. These include transitional costs associated with the conversion to a new technology platform. Decreasing membership has reduced total variable costs, but BCBSVT has delayed reducing its administrative budget in order to support transition activities. This transition will be complete by the end of 2019, so we have reflected a transitional savings of \$0.53 PMPM in 2021 for the large group line of business.

We calculate per unit per month (PUPM) values using the adjusted experience period administrative expenses and unit counts. For the segments included in this filing, there are five such PUPM values and one percent of claims value – one for each of the cost categories indicated above.

Exhibit 5B, line C shows the experience period administrative expenses PUPM.

Projection Factors

We project actual administrative costs PUPM from the experience period to each of the rating periods based on a 2.2 percent annual trend. These projection factors make a reasonable but modest provision for increases in overall operating costs PUPM. There are no known

¹² Per unit per month costs for Cost Plus members with Medicare Supplement plans are set equal to the corresponding values for conventionally funded Medicare Supplement members.

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extraordinary or mandate-related costs at this time which require a separate provision for the rating periods involved in this filing.

We assume that personnel costs (wages and benefits) will increase by three percent, the budgeted wage increase for 2020, over the projection period. We assume other operating costs will remain flat. Based on year-to-date November 2019 information, we calculate that 73.9 percent of our administrative costs are for salaries and benefits. We therefore increase our total projected administrative expenses by the weighted average of 2.2 percent per annum.

Development of Administrative Charges Trend		
		Percent of Total
Employee costs	A	56.7%
Purchased services	B	23.3%
Other operating costs	C	20.0%
Subtotal administrative expenses	$D = A + B + C$	100.0%
Total personnel costs	$E = A / (A + C)$	73.9%
Trend for personnel costs	F	3.0%
Total administrative charges trend	$G = \{(1+F) \times E + (1.00) \times (1-E)\} - 1$	2.2%

For 2020, we project total BCBSVT membership will decrease, resulting in an increase in admin charges PMPM. We calculate PMPM admin charges with experience period enrollment and projected 2020 enrollment. Using the lower 2020 enrollment increases the PMPM by 6.0 percent. Cost accounting exercises suggest that variable costs represent approximately half of total administrative expenses. BCBSVT is committed to providing insurance coverage for our members at the most affordable rates possible; as a result, even though it is impractical to react to enrollment shifts by immediately right-sizing staff, we nonetheless remove from our projection the entirety of variable costs associated with the reduced enrollment. We therefore apply a net increase of 3.0 percent to the base PUPM charges to account for the reduction in membership. The table below shows the calculation.

Development of Enterprise Membership Adjustment			
	Enterprise Admin Expenses	Member Months	Admin PMPM
Experience Period	\$68,691,905	2,502,754	\$27.45
Projected 2020 Enrollment		2,631,991	\$29.08
Elimination of 100% of variable costs for reduced enrollment			\$28.26
Adjustment for Enterprise Membership		$\$28.26 / \$27.45 = 1.030$	

Charges for Group Accounts

Exhibit 5B shows the administrative charge PUPM values used by the rating formula to produce account-specific administrative charges. The formula applies these values to an association's corresponding unit counts and expresses the resulting charges as an equivalent PMPM.

The administrative charges do not include amounts for special items or unique services not part of BCBSVT or TVHP's standard scope of administrative services (e.g., special booklets,

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certificates, or reports). Charges for such services will be determined and applied separately on an account-specific basis. The filed charges also do not include commissions based on the commission scale applicable to the account. The rating formula calculates and applies commissions separately.

6.4. Net Cost of Reinsurance

BCBSVT purchased reinsurance for claims in excess of \$1,000,000 for 2020 and expects to purchase similar reinsurance in future years with limits equal to the 2020 limit. We estimate that the target loss ratio for the reinsurance is approximately 75 percent, which implies a cost of reinsurance of approximately 33 percent of claims above the reinsurance limit. We use the total paid trend of 8.5 percent and a leverage factor for the \$1,000,000 reinsurance limit from Milliman's 2017 *Health Cost Guidelines - Reinsurance* to calculate the expected annual claim cost above the reinsurance limit, then multiply the cost by 33 percent to determine the annual cost of reinsurance. We divide this by 12 to produce the PMPM cost of reinsurance. The net cost of reinsurance for association plans effective January 1, 2021 is \$1.62 PMPM.

6.5. Pharmacy Rebates

We calculate pharmacy rebates by taking the experience period rebates and trending them using the brand cost trend (from Exhibit 2F). We pay pharmacy rebates with an average seven-month delay from the time of the original claims. For months in the experience for which we do not have detailed rebate information, we include an estimated rebate amount in the calculation.

6.6. OneCare Coordination Fee

BCBSVT pays OneCare VT a care coordination fee for attributed members to directly support ACO providers, including community providers, as they deploy new care models. This model mirrors the investment Medicaid has made in the ACO provider network and supports the comprehensive care models being tested within the ACO program. The monthly charge for members attributed to OneCare is \$3.25.

6.7. Contribution to Reserve

As directed by management, we include the following contribution to reserve factors in the rate calculation:

Contribution to Reserve	
BCBSVT Insured AHPs	1.5% of premium

6.8. State Mandates and Assessments

Vermont Vaccine Purchasing Program Payments

The Vermont Vaccine Purchasing Program¹³ offers health care providers state-supplied vaccines at no charge by collecting payments from Health plans, insurers, and other payers. This assessment is a PMPM charge applied to members residing in Vermont who are ages 0 to

¹³ <http://www.vtvaccine.org/>

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64. On May 1, 2019, the Vermont Vaccine Purchasing Program released a memo that included the anticipated rates for April 1, 2020 – March 31, 2021: *“For planning purposes, the best estimate at this time for the SFY2021 assessment rate is \$10.07 per child covered life per month and \$1.02 per adult covered life per month. The SFY2021 assessment rate will be reviewed for final determination in April 2020.”* We will update these rates once the actual rates are known.

New Hampshire Purchasing Program Payments

The New Hampshire Purchasing Program¹⁴ offers health care providers state-supplied vaccines at no charge by collecting payments from health plans, insurers, and other payers. The assessment for 2020 is \$6.80 for each child that is a New Hampshire resident. The current best estimate of the 2021 rate is \$7.00 per assessable life per month. We will use the new rate once it is approved.

New York State Health Care Reform Act

BCBSVT pays the New York GME Covered Lives Assessment¹⁵ for all members who are New York residents as part of the New York State Health Care Reform Act. The assessment varies based on the county of residence. We will use the new rates once they are approved.

Maine Guaranteed Access Reinsurance Association

BCBSVT pays the Maine Guaranteed Access Reinsurance Association Assessment¹⁶. The 2019 assessment is \$4.00 per member per month for each member that is a Maine resident. We will use the new rates once they are approved.

Health Care Claims Tax

The Health Care Claims Tax of 0.999 percent applies to all claims or capitations incurred by members with Vermont zip codes. We use the percentage of current members with Vermont zip codes to estimate the percentage of rating period claims expected to be incurred by Vermont members. Act 73 of 2013 sunset the 0.199 percent assessment for the Health IT-Fund. Given this fee has regularly been extended close to its sunset date, we will include it in the calculation and update the charge if new information becomes available.

Blueprint

BCBSVT participates in the Vermont Blueprint for Health program. The current assessments for this program, applied to members who are attributed to a Blueprint provider as of the month the renewal is produced, are \$2.77 PMPM for the Community Health Team and \$3.00 PMPM for the Patient Centered Medical Homes (PCMH). PCMH are eligible for up to \$0.50 for performance. We project that our total PMPM for PCMH will be \$3.22. We base the projected performance payment on the average payment for large groups in 2019. We will incorporate any updates made to the Blueprint Manual¹⁷ in pricing.

¹⁴ <https://nhvaccine.org/>

¹⁵ <https://www.health.ny.gov/regulations/hcra/gmecl.htm>

¹⁶ <http://www.mgara.org/>

¹⁷ <http://blueprintforhealth.vermont.gov/>

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Green Mountain Care Board Billback

The Green Mountain Care Board assesses BCBSVT a billback. We apply billback amounts from the administrative charges experience period described in section 6.3 to projected member months to develop the charge of \$2.09 PMPM.

Other Assessments

We include other state mandates and assessments in the calculation as applicable.

6.9. Federal Assessments

Patient-Centered Outcomes Research Institute Fee:

This fee is part of the Affordable Care Act and applies to all plan years ended after September 30, 2012 and before October 1, 2029. We provide the estimated fees in the table below. We will update this estimate if we receive additional information.

PCORI	
Plan Year Ending Between	Fee Amount
October 2021 - September 2022	\$2.91 PMPY
October 2022 - September 2023	\$3.09 PMPY

Other Assessments

We include other federal mandates and assessments in the calculation as applicable.

7. Medical Loss Ratio Projection

We use the factors and formula in this filing to project a Medical Loss Ratio (MLR) for 2021. Using the manual rate as a proxy for projected claims, we project a 2021 MLR of 90.5 percent. Some of the line items, such as rebates, estimated HCQ, and broker commissions, use insured large group experience as a proxy for associations.

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BCBSVT MLR			
(A)	Manual Rate	\$632.81	Exhibit 4A
(B)	Estimated Rebates	\$14.57	2018 large group MLR Filing, untrended
(C)	Estimated HCQ	\$3.04	2018 large group MLR Filing, untrended
(D)	State Mandates and Assessments	\$13.44	Calculation as described on Exhibit 1C, using latest actual PMPM as needed
(E)	MLR Numerator	\$634.73	= (A) - (B) + (C) + (D)
(F)	Projected Claims	\$631.68	= (A) - (B) + (D)
(G)	Net Cost of Reinsurance	\$1.62	Actuarial Memorandum, Section 6.4
(H)	Administrative Charge	\$49.67	Q3 2020 Large Group Filing
(I)	GMCB Billback	\$2.09	Calculation using 2019 Charges
(J)	Subtotal	\$685.07	= (F) + (G) + (H) + (I)
(K)	Total Premium	\$701.54	= (J) / (1 - 0.008 - 0.015)
(L)	Federal Insurer Fee	\$0.00	= (K) x 0.0% (from Actuarial Memorandum, Section 6.8)
(M)	Estimated Commissions	\$5.95	= (K) x 0.8% (from 2018 large group MLR filing)
(N)	Contribution to Reserve	\$10.52	= (K) x 1.5% (from Actuarial Memorandum, Section 6.6)
(O)	MLR Denominator	\$701.54	= (K) - (L)
(P)	MLR	90.5%	= (E) / (O)

The above calculations represent estimates assuming that all pricing assumptions hold true, and assuming no change from 2018 values for various quantities (e.g. rebates, commissions).

8. Act 193 Information

The table below shows the percentage of the 2021 manual rate for generic, brand, and specialty drugs. We calculate the percent of 2021 manual rate as the experience drug claims (January 2019 - December 2019, paid through February 2020), trended to 2021 and adjusted to the pharmacy contract in force for 2021, divided by the 2021 manual rate of \$632.81 (from section 6.1).

Drugs Processed Under the Pharmacy Benefit	
Type	Percent of 2021 Manual Rate
Generic	1.8%
Brand	6.5%
Specialty	13.4%

Please see Addendum A for the specialty formulary as of 1/1/2020.

Drugs administered in an outpatient setting and covered by the medical benefit represent 9.1 percent of the 2021 manual rate. We trended drug claims covered by the medical benefit from the renewal experience period to 2021 and divided by the 2021 manual rate of \$632.81.

Express Scripts (ESI) administers BCBSVT's pharmacy benefits. ESI will manage claims processed through the pharmacy benefit but not claims processed through the medical benefit for use in a facility.

Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Filing
Actuarial Memorandum

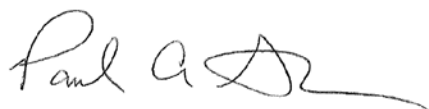
9. Actuarial Opinion

The purpose of this filing is to establish the formula, manual rate, and accompanying factors that will be used for Blue Cross and Blue Shield of Vermont association health plans. This filing is not intended to be used for other purposes.

The data used in this analysis has been reviewed for reasonableness and consistency; however, it has not been audited.

It is my opinion that the rating formula and factors presented in this filing are reasonable, and have been prepared in accordance with applicable Actuarial Standards of Practice. The formula and factors will produce premium rates that are reasonable in relation to the benefits provided, and will not be excessive, deficient or unfairly discriminatory.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries, and I meet the Academy's Qualification Standards to render this opinion.

A handwritten signature in black ink, appearing to read "Paul A. Schultz", with a stylized flourish at the end.

Paul A Schultz, F.S.A., M.A.A.A.

April 30, 2020

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

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Example Calculation of Projected Single Claims Rate for Active Members

Benefit-Adjusted Projected Single Claims Rate:

Experience Period Paid Claims	\$2,142,000	A
Experience Period Claims Amount above \$70,000 Pooling Limit	\$242,000	B
Capped Claims	\$1,900,000	$C = A - B$
Completion Factor	1.005	D
Completed Capped Claims	\$1,910,000	$E = C \times D$
Expected Claims above \$70,000 Pooling Limit	\$228,000	F
Experience Adjustment Factor	1.000	G
Adjusted Experience Period Claims	\$2,138,000	$H = (E + F) \times G$
Experience Period Member Months	4,000	I
Adjusted Experience Period Claims PMPM	\$534.50	$J = H \div I$
Average Experience Period Seasonally Adjusted Benefit Relativity Factor	0.775	K
Demographic Normalization	1.000	L
Benefit-Adjusted Experience Period Single Claims Rate	\$689.24	$M = J \div K \times L$
Trend	1.084	N
Trend Months	18	O
Trend Factor	1.129	$P = N ^ { (O/12)}$
Pharmacy Contract Adjustment	0.990	Q
Projected Single Contract Rate	\$770.10	$R = M \times P \times Q$
Adjusted Manual Rate	\$722.55	S
Credibility factor	53%	T
Benefit-Adjusted Projected Single Claims Rate	\$747.96	$U = (R \times T) + \{ S \times (1 - T)\}$

Credibility Calculation

Active Member Months	4,000	a
Member Months for Full Credibility at \$70,000 Pooling Limit	14,002	b
Credibility	53%	$c = (a / b) ^ {0.5}$

Example Calculation of Projected Single Claims Rate for Medicare Primary Members

Benefit-Adjusted Projected Single Claims Rate:

Experience Period Paid Claims	\$16,000	A
Experience Period Claims Amount above \$70,000 Pooling Limit	\$0	B
Capped Claims	\$16,000	$C = A - B$
Completion Factor	1.011	D
Completed Capped Claims	\$16,200	$E = C \times D$
Expected Claims above \$70,000 Pooling Limit	\$0	F
Experience Adjustment Factor	1.000	G
Adjusted Experience Period Claims	\$16,200	$H = (E + F) \times G$
Experience Period Member Months	96	I
Adjusted Experience Period Claims PMPM	\$168.75	$J = H \div I$
Average Experience Period Seasonal Adjusted Benefit Relativity Factor	0.446	K
Demographic Normalization	1.000	L
Benefit-Adjusted Experience Period Single Claims Rate	\$378.45	$M = J \div K \times L$
Trend	\$1.07	N
Trend Months	\$18.00	O
Trend Factor	1.113	$P = N ^ { (O/12)}$
Pharmacy Contract Adjustment	0.990	Q
Projected Single Contract Rate	\$417.01	$R = M \times P \times Q$
Adjusted Manual Rate	\$0.00	S
Credibility factor	11%	T
Benefit-Adjusted Projected Single Claims Rate	\$44.78	$U = (R \times T) + \{ S \times (1 - T)\}$

Credibility Calculation

Medicare Primary Member Months	96	a
Member Months for Full Credibility	8,325	b
Credibility	11%	$c = (a / b) ^ {0.5}$

Example Calculation of Projected Single Claims Rate for Active Members with Multiple Experience Periods

Benefit-Adjusted Projected Single Claims Rate:

Period	A	B	C	Manual	
Experience Period Start	7/1/2019	7/1/2018	7/1/2018		
Experience Period End	6/30/2020	6/30/2019	6/30/2019		
Paid Claims in Experience Period	\$2,142,000	\$2,000,000	\$1,820,000		A
Claims over \$110,000 Pooling Limit	\$242,000	\$321,000	\$80,000		B
Capped Claims	\$1,900,000	\$1,679,000	\$1,740,000		C = A — B
Completion Factor	1.005	1.000	1.000		D
Completed Capped Claims	\$1,910,000	\$1,680,000	\$1,740,000		E = C x D
Expected Claims above \$70,000 Pooling Limit	\$228,000	\$212,000	\$200,000		F
Experience Adjustment Factor	1.000	1.000	1.000		G
Adjusted Experience Period Claims	\$2,138,000	\$1,892,000	\$1,940,000		H = (E + F) x G
Experience Period Member Months	4,000	4,100	3,900		I
Adjusted Experience Period Claims PMPM	\$534.50	\$461.46	\$497.44		J = H ÷ I
Average Experience Period Seasonally Adjusted Benefit Relativity Factor	0.775	0.775	0.775		K
Demographic Normalization	1.000	1.002	0.998		L
Benefit-Adjusted Experience Period Single Claims Rate	\$689.24	\$596.25	\$640.16		M = J ÷ K x L
Trend	1.072	1.072	1.072		N
Trend Months	18	30	42		O
Trend Factor	1.110	1.190	1.276		P = N ^ (O/12)
Pharmacy Contract Adjustment	0.990	0.980	0.975		Q
Projected Single Contract Rate	\$757.35	\$695.25	\$796.11	\$722.55	R = M x P x Q
Credibility Calculation	A	B	C	Manual	
Starting Residual	100.0%	46.6%	21.4%	10.1%	S = 1 - Σ W
Active Member Months	4,000	4,100	3,900		T
Member Months for Full Credibility at \$70,000 Pooling Limit	14,002	14,002	14,002		U
Credibility	53.4%	54.1%	52.8%		V = (T / U) ^ 0.5
Rating Credibility	53.4%	25.2%	11.3%	10.1%	W = S x V
Projected Single Contract Rate	\$757.35	\$695.25	\$796.11	\$722.55	X
Credibility	53.4%	25.2%	11.3%	10.1%	Y
Benefit-Adjusted Projected Single Claims Rate	\$404.79	\$175.13	\$89.75	\$72.89	Z = W x Y
Σ Benefit-Adjusted Projected Single Claims Rate	\$742.57				= Σ Z

Example Calculation of Required Premium by Product and Tier
Illustrative Only

From Exhibit 1A : Active Benefit-Adjusted Projected Single Claims Rate (S) \$747.96
Medicare Primary Benefit-Adjusted Projected Single Claims Rate (S) \$44.78

Plan A		Single	2-Person	Family	Medicare Primary
Members per contract		1.000	2.000	3.940	1.000
BRV:	A	0.929	1.859	2.622	0.439
Projected Claims:	B1 = A x S	\$695.08	\$1,390.17	\$1,961.36	\$19.64
Net Cost of Reinsurance:	B2	\$1.71	\$3.42	\$6.74	\$0.00
Projected Rx Rebate:	B3	-\$14.00	-\$28.00	-\$55.16	-\$14.00
State Mandates and Assessments					
Vaccines for Vermonters	C1	\$2.50	\$5.00	\$9.85	\$2.50
Blueprint for Health	C2	\$6.01	\$12.02	\$23.68	\$6.01
Health Care Claims Tax	C3 = 0.999% * B1	\$6.94	\$13.89	\$19.59	\$0.20
GMCB Billback	C4	\$1.87	\$3.74	\$7.37	\$1.87
Administrative Charge	D	\$50.00	\$100.00	\$197.00	\$50.00
Commission (% premium)	E	3.00%			
Contribution to Reserve	F	1.50%			
Federal Insurer Fee	G	2.20%			
Required Premium:	$H = [\Sigma(B_i) + \Sigma(C_i) + D] / (1 - E - F - G)$	\$803.98	\$1,607.97	\$2,326.29	\$70.97

Plan B		Single	2-Person	Family	Medicare Secondary
Members per contract		1.000	2.000	3.938	1.000
BRV:	A	1.023	2.046	2.887	0.453
Projected Claims:	B1 = A x S	\$765.17	\$1,530.33	\$2,159.12	\$20.29
Net Cost of Reinsurance:	B2	\$1.71	\$3.42	\$6.74	\$0.00
Projected Rx Rebate:	B3	-\$14.00	-\$28.00	-\$55.16	-\$14.00
State Mandates and Assessments					
Vaccines for Vermonters	C1	\$2.50	\$5.00	\$9.85	\$2.50
Blueprint for Health	C2	\$6.01	\$12.02	\$23.68	\$6.01
Health Care Claims Tax	C3 = 0.999% * B1	\$7.64	\$15.29	\$21.57	\$0.20
GMCB Billback	C4	\$1.87	\$3.74	\$7.37	\$1.87
Administrative Charge	D	\$50.00	\$100.00	\$197.00	\$50.00
Commission (% premium)	E	3.00%			
Contribution to Reserve	F	1.50%			
Federal Insurer Fee	G	2.20%			
Required Premium:	$H = [\Sigma(B_i) + \Sigma(C_i) + D] / (1 - E - F - G)$	\$879.85	\$1,759.70	\$2,540.37	\$71.68

ILLUSTRATION OF CONTRACT NORMALIZATION

Month	Contract Increase	Normalization Factor	Experience Claims	Normalized Claims
Nov-15		1.1699	\$1,000,000	\$1,169,859
Dec-15		1.1699	\$1,000,000	\$1,169,859
Jan-16		1.1699	\$1,000,000	\$1,169,859
Feb-16		1.1699	\$1,000,000	\$1,169,859
Mar-16		1.1699	\$1,000,000	\$1,169,859
Apr-16		1.1699	\$1,000,000	\$1,169,859
May-16		1.1699	\$1,000,000	\$1,169,859
Jun-16		1.1699	\$1,000,000	\$1,169,859
Jul-16		1.1699	\$1,000,000	\$1,169,859
Aug-16		1.1699	\$1,000,000	\$1,169,859
Sep-16		1.1699	\$1,000,000	\$1,169,859
Oct-16	1.0400	1.1249	\$1,000,000	\$1,124,864
Nov-16		1.1249	\$1,000,000	\$1,124,864
Dec-16		1.1249	\$1,000,000	\$1,124,864
Jan-17		1.1249	\$1,000,000	\$1,124,864
Feb-17		1.1249	\$1,000,000	\$1,124,864
Mar-17		1.1249	\$1,000,000	\$1,124,864
Apr-17		1.1249	\$1,000,000	\$1,124,864
May-17		1.1249	\$1,000,000	\$1,124,864
Jun-17		1.1249	\$1,000,000	\$1,124,864
Jul-17		1.1249	\$1,000,000	\$1,124,864
Aug-17		1.1249	\$1,000,000	\$1,124,864
Sep-17		1.1249	\$1,000,000	\$1,124,864
Oct-17	1.0400	1.0816	\$1,000,000	\$1,081,600
Nov-17		1.0816	\$1,000,000	\$1,081,600
Dec-17		1.0816	\$1,000,000	\$1,081,600
Jan-18		1.0816	\$1,000,000	\$1,081,600
Feb-18		1.0816	\$1,000,000	\$1,081,600
Mar-18		1.0816	\$1,000,000	\$1,081,600
Apr-18		1.0816	\$1,000,000	\$1,081,600
May-18		1.0816	\$1,000,000	\$1,081,600
Jun-18		1.0816	\$1,000,000	\$1,081,600
Jul-18		1.0816	\$1,000,000	\$1,081,600
Aug-18		1.0816	\$1,000,000	\$1,081,600
Sep-18		1.0816	\$1,000,000	\$1,081,600
Oct-18	1.0400	1.0400	\$1,000,000	\$1,040,000
Nov-18		1.0400	\$1,000,000	\$1,040,000
Dec-18		1.0400	\$1,000,000	\$1,040,000
Jan-19		1.0400	\$1,000,000	\$1,040,000
Feb-19		1.0400	\$1,000,000	\$1,040,000
Mar-19		1.0400	\$1,000,000	\$1,040,000
Apr-19		1.0400	\$1,000,000	\$1,040,000
May-19		1.0400	\$1,000,000	\$1,040,000
Jun-19		1.0400	\$1,000,000	\$1,040,000
Jul-19		1.0400	\$1,000,000	\$1,040,000
Aug-19		1.0400	\$1,000,000	\$1,040,000
Sep-19		1.0400	\$1,000,000	\$1,040,000
Oct-19	1.0400	1.0000	\$1,000,000	\$1,000,000

MEDICAL UTILIZATION TREND CALCULATION

Month	Membership	Original Allowed Claims (adjusted to the VHP network)			Adjusted Claims - Normalized for Contract Changes			ASF Normalization Factors		Working Day Normalization Factor		Adjusted Allowed Claims		
		Facility	Professional	Total Allowed Claims	Facility	Professional	Total Allowed Claims	Monthly ASF	ASF Normalization	Working Days	Working Day Normalization	Facility PMPM	Professional PMPM	Total PMPM
Nov-15	57,692	REDACTED										\$316.72	\$138.69	\$455.41
Dec-15	57,890											\$272.01	\$126.86	\$398.88
Jan-16	52,944											\$282.00	\$127.21	\$409.21
Feb-16	52,655											\$284.86	\$126.25	\$411.11
Mar-16	52,655											\$263.10	\$120.68	\$383.78
Apr-16	52,628											\$270.52	\$121.65	\$392.17
May-16	52,040											\$256.29	\$125.21	\$381.51
Jun-16	52,000											\$266.93	\$122.52	\$389.46
Jul-16	51,849											\$272.31	\$117.22	\$389.53
Aug-16	51,743											\$253.14	\$117.81	\$370.95
Sep-16	51,752											\$303.10	\$128.51	\$431.61
Oct-16	51,944											\$285.76	\$131.79	\$417.55
Nov-16	51,926											\$311.53	\$141.71	\$453.23
Dec-16	51,220											\$301.27	\$137.09	\$438.36
Jan-17	54,466											\$276.58	\$131.98	\$408.56
Feb-17	54,376											\$253.40	\$122.58	\$375.98
Mar-17	54,286											\$261.20	\$123.58	\$384.78
Apr-17	54,315											\$261.18	\$129.27	\$390.45
May-17	54,511											\$272.85	\$130.10	\$402.95
Jun-17	54,564											\$265.26	\$124.99	\$390.25
Jul-17	54,781											\$309.21	\$132.88	\$442.08
Aug-17	54,843											\$236.42	\$118.57	\$354.99
Sep-17	54,384											\$262.14	\$130.44	\$392.58
Oct-17	54,362											\$292.42	\$133.33	\$425.75
Nov-17	54,513											\$288.40	\$144.00	\$432.41
Dec-17	54,478											\$316.92	\$136.47	\$453.39
Jan-18	52,507											\$297.59	\$137.07	\$434.66
Feb-18	52,433											\$294.54	\$137.20	\$431.74
Mar-18	52,332											\$259.13	\$131.45	\$390.58
Apr-18	52,560											\$295.32	\$134.77	\$430.08
May-18	52,733											\$271.99	\$136.62	\$408.61
Jun-18	52,720											\$266.88	\$129.44	\$396.32
Jul-18	53,446											\$266.21	\$130.33	\$396.55
Aug-18	53,468											\$266.07	\$122.69	\$388.75
Sep-18	53,278											\$309.27	\$140.30	\$449.57
Oct-18	53,566											\$284.91	\$139.38	\$424.29
Nov-18	53,900											\$282.84	\$140.20	\$423.04
Dec-18	53,803											\$323.57	\$150.72	\$474.29
Jan-19	54,540											\$297.87	\$136.52	\$434.39
Feb-19	54,495											\$295.40	\$135.15	\$430.55
Mar-19	54,459											\$302.63	\$140.46	\$443.09
Apr-19	54,100											\$272.02	\$134.38	\$406.40
May-19	53,986											\$284.05	\$134.84	\$418.89
Jun-19	53,631											\$299.13	\$134.94	\$434.07
Jul-19	52,969											\$304.12	\$135.34	\$439.46
Aug-19	52,672											\$271.78	\$125.85	\$397.63
Sep-19	52,492											\$267.79	\$129.76	\$397.55
Oct-19	52,336											\$320.69	\$143.89	\$464.58

YE 201910 Average: Annual Trend: 3.04% 1.38% 2.50%

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Facility - 48 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-15	57,692	\$316.72	\$273.37		\$273.97							
Dec-15	57,890	\$272.01	\$273.72		\$274.34						\$316.72	
Jan-16	52,944	\$282.00	\$274.09		\$274.71						\$300.66	
Feb-16	52,655	\$284.86	\$274.46		\$275.09						\$293.94	
Mar-16	52,655	\$263.10	\$274.80		\$275.45						\$290.65	
Apr-16	52,628	\$270.52	\$275.17		\$275.82						\$280.73	
May-16	52,040	\$256.29	\$275.53		\$276.19						\$277.02	
Jun-16	52,000	\$266.93	\$275.90		\$276.57						\$269.54	
Jul-16	51,849	\$272.31	\$276.26		\$276.94						\$268.55	
Aug-16	51,743	\$253.14	\$276.63		\$277.31						\$269.86	
Sep-16	51,752	\$303.10	\$277.00		\$277.69						\$263.80	
Oct-16	51,944	\$285.76	\$277.36	\$275.32	\$278.06	\$275.97					\$277.87	
Nov-16	51,926	\$311.53	\$277.73	\$275.70	\$278.44	\$276.36	\$316.72		\$316.72		\$280.67	
Dec-16	51,220	\$301.27	\$278.09	\$276.07	\$278.80	\$276.75	\$271.91		\$271.87		\$291.72	
Jan-17	54,466	\$276.58	\$278.47	\$276.45	\$279.18	\$277.13	\$282.56		\$282.59		\$295.12	
Feb-17	54,376	\$253.40	\$278.84	\$276.82	\$279.56	\$277.51	\$285.58		\$285.61		\$288.44	
Mar-17	54,286	\$261.20	\$279.18	\$277.20	\$279.90	\$277.89	\$263.29		\$263.23		\$275.83	
Apr-17	54,315	\$261.18	\$279.55	\$277.57	\$280.28	\$278.26	\$270.52		\$270.40		\$270.53	
May-17	54,511	\$272.85	\$279.92	\$277.94	\$280.64	\$278.64	\$255.94		\$255.71		\$267.13	
Jun-17	54,564	\$265.26	\$280.29	\$278.30	\$281.02	\$279.01	\$266.71		\$266.47		\$269.14	
Jul-17	54,781	\$309.21	\$280.66	\$278.67	\$281.39	\$279.38	\$271.98		\$271.70		\$267.70	
Aug-17	54,843	\$236.42	\$281.04	\$279.04	\$281.77	\$279.75	\$253.58		\$253.42		\$282.56	
Sep-17	54,384	\$262.14	\$281.41	\$279.40	\$282.14	\$280.12	\$303.55		\$303.31		\$265.95	
Oct-17	54,362	\$292.42	\$281.78	\$279.76	\$282.51	\$280.49	\$285.41	\$277.17	\$285.00	\$277.02	\$264.53	\$276.52
Nov-17	54,513	\$288.40	\$282.16	\$280.13	\$282.89	\$280.85	\$314.14	\$277.11	\$313.75	\$276.93	\$274.50	\$276.02
Dec-17	54,478	\$316.92	\$282.52	\$280.49	\$283.25	\$281.21	\$282.19	\$277.94	\$281.42	\$277.70	\$279.45	\$275.07
Jan-18	52,507	\$297.59	\$282.90	\$280.85	\$283.63	\$281.58	\$278.74	\$277.62	\$278.04	\$277.32	\$292.88	\$274.83
Feb-18	52,433	\$294.54	\$283.28	\$281.21	\$284.01	\$281.94	\$271.74	\$276.48	\$271.13	\$276.13	\$294.55	\$275.29
Mar-18	52,332	\$259.13	\$283.63	\$281.58	\$284.35	\$282.31	\$262.39	\$276.44	\$261.77	\$276.05	\$294.52	\$276.79
Apr-18	52,560	\$295.32	\$284.01	\$281.95	\$284.73	\$282.68	\$267.29	\$276.20	\$266.75	\$275.77	\$281.79	\$277.73
May-18	52,733	\$271.99	\$284.38	\$282.32	\$285.10	\$283.05	\$264.32	\$276.94	\$263.86	\$276.49	\$286.61	\$279.35
Jun-18	52,720	\$266.88	\$284.76	\$282.69	\$285.48	\$283.42	\$268.67	\$277.13	\$268.40	\$276.67	\$281.33	\$280.38
Jul-18	53,446	\$266.21	\$285.13	\$283.07	\$285.84	\$283.79	\$290.10	\$278.65	\$289.56	\$278.17	\$276.10	\$281.11
Aug-18	53,468	\$266.07	\$285.51	\$283.44	\$286.22	\$284.17	\$249.46	\$278.36	\$249.55	\$277.90	\$272.51	\$280.26
Sep-18	53,278	\$309.27	\$285.90	\$283.82	\$286.60	\$284.54	\$291.44	\$277.30	\$291.16	\$276.85	\$270.15	\$280.64
Oct-18	53,566	\$284.91	\$286.27	\$284.20	\$286.96	\$284.92	\$294.22	\$278.03	\$293.84	\$277.58	\$284.16	\$282.31
Nov-18	53,900	\$282.84	\$286.65	\$284.58	\$287.34	\$285.30	\$311.45	\$277.77	\$310.90	\$277.30	\$284.40	\$283.15
Dec-18	53,803	\$323.57	\$287.02	\$284.97	\$287.71	\$285.68	\$303.95	\$279.61	\$303.20	\$279.14	\$283.81	\$283.52
Jan-19	54,540	\$297.87	\$287.41	\$285.34	\$288.09	\$286.05	\$294.70	\$280.97	\$294.40	\$280.53	\$298.06	\$283.99
Feb-19	54,495	\$295.40	\$287.80	\$285.72	\$288.46	\$286.42	\$289.53	\$282.45	\$289.49	\$282.06	\$297.98	\$284.32
Mar-19	54,459	\$302.63	\$288.15	\$286.10	\$288.81	\$286.79	\$269.60	\$282.99	\$270.33	\$282.72	\$297.03	\$284.57
Apr-19	54,100	\$272.02	\$288.53	\$286.47	\$289.18	\$287.16	\$288.59	\$284.74	\$288.80	\$284.53	\$299.02	\$286.01
May-19	53,986	\$284.05	\$288.91	\$286.85	\$289.55	\$287.53	\$277.06	\$285.77	\$277.76	\$285.66	\$289.31	\$286.23
Jun-19	53,631	\$299.13	\$289.30	\$287.22	\$289.93	\$287.90	\$278.03	\$286.52	\$278.87	\$286.50	\$287.39	\$286.73
Jul-19	52,969	\$304.12	\$289.67	\$287.59	\$290.29	\$288.26	\$292.19	\$286.69	\$292.52	\$286.74	\$291.58	\$288.01
Aug-19	52,672	\$271.78	\$290.06	\$287.97	\$290.67	\$288.63	\$267.67	\$288.22	\$269.48	\$288.41	\$296.06	\$289.95
Sep-19	52,492	\$267.79	\$290.45	\$288.34	\$291.05	\$288.99	\$312.77	\$289.95	\$312.42	\$290.14	\$287.32	\$291.37
Oct-19	52,336	\$320.69	\$290.83	\$288.72	\$291.42	\$289.36	\$303.97	\$290.74	\$303.86	\$290.95	\$280.27	\$291.07
Nov-19	52,336		\$291.22	\$289.09	\$291.79	\$289.73	\$314.88	\$290.97	\$314.28	\$291.18	\$294.76	\$291.93
Dec-19	52,336		\$291.60	\$289.47	\$292.16	\$290.10	\$327.94	\$292.90	\$326.45	\$293.05	\$294.74	\$292.84
Jan-20	52,336		\$291.99	\$289.85	\$292.54	\$290.47	\$311.75	\$294.29	\$311.35	\$294.43	\$294.72	\$292.55
Feb-20	52,336		\$292.38	\$290.24	\$292.92	\$290.84	\$307.87	\$295.82	\$307.80	\$295.96	\$294.70	\$292.26
Mar-20	52,336		\$292.75	\$290.63	\$293.27	\$291.22	\$298.33	\$298.28	\$299.14	\$298.42	\$294.68	\$292.05
Apr-20	52,336		\$293.14	\$291.01	\$293.65	\$291.59	\$297.49	\$299.04	\$298.15	\$299.22	\$294.66	\$291.67
May-20	52,336		\$293.52	\$291.40	\$294.01	\$291.97	\$295.40	\$300.62	\$296.42	\$300.83	\$294.64	\$292.12
Jun-20	52,336		\$293.92	\$291.79	\$294.39	\$292.34	\$302.23	\$302.68	\$302.93	\$302.87	\$294.62	\$292.73
Jul-20	52,336		\$294.30	\$292.18	\$294.76	\$292.72	\$312.92	\$304.42	\$312.77	\$304.57	\$294.60	\$292.98
Aug-20	52,336		\$294.69	\$292.57	\$295.14	\$293.09	\$283.41	\$305.75	\$285.64	\$305.94	\$294.57	\$292.86
Sep-20	52,336		\$295.09	\$292.95	\$295.52	\$293.46	\$310.22	\$305.53	\$310.04	\$305.74	\$294.55	\$293.46
Oct-20	52,336		\$295.47	\$293.34	\$295.88	\$293.84	\$327.01	\$307.45	\$326.05	\$307.59	\$294.53	\$294.65
Nov-20	52,336		\$295.87	\$293.73	\$296.26	\$294.21	\$331.34	\$308.83	\$329.75	\$308.87	\$294.51	\$294.63
Dec-20	52,336		\$296.26	\$294.12	\$296.63	\$294.58	\$345.02	\$310.25	\$341.91	\$310.16	\$294.49	\$294.61
Jan-21	52,336		\$296.65	\$294.50	\$297.00	\$294.95	\$327.92	\$311.60	\$326.82	\$311.45	\$294.47	\$294.59
Feb-21	52,336		\$297.05	\$294.89	\$297.38	\$295.32	\$323.76	\$312.92	\$323.27	\$312.74	\$294.45	\$294.56
Mar-21	52,336		\$297.41	\$295.28	\$297.72	\$295.70	\$313.66	\$314.20	\$314.60	\$314.03	\$294.43	\$294.54
Apr-21	52,336		\$297.81	\$295.67	\$298.10	\$296.07	\$312.72	\$315.47	\$313.62	\$315.32	\$294.41	\$294.52
May-21	52,336		\$298.20	\$296.06	\$298.47	\$296.44	\$310.46	\$316.72	\$311.89	\$316.61	\$294.39	\$294.50
Jun-21	52,336		\$298.60	\$296.45	\$298.85	\$296.81	\$317.56	\$318.00	\$318.40	\$317.90	\$294.37	\$294.48
Jul-21	52,336		\$298.99	\$296.84	\$299.21	\$297.18	\$328.73	\$319.32	\$328.24	\$319.19	\$294.35	\$294.46
Aug-21	52,336		\$299.39	\$297.23	\$299.59	\$297.55	\$297.67	\$320.51	\$301.10	\$320.47	\$294.33	\$294.44
Sep-21	52,336		\$299.79	\$297.62	\$299.97	\$297.92	\$325.77	\$321.80	\$325.50	\$321.76	\$294.31	\$294.42
Oct-21	52,336		\$300.18	\$298.02	\$300.33	\$298.29	\$343.33	\$323.16	\$341.52	\$323.05	\$294.29	\$294.40
Nov-21	52,336		\$300.58	\$298.41	\$300.71	\$298.66	\$347.81	\$324.53	\$345.21	\$324.34	\$294.27	\$294.38
Dec-21	52,336		\$300.98	\$298.80	\$301.08	\$299.04	\$362.09	\$325.96	\$357.38	\$325.63	\$294.25	\$294.36
Utilization Trend			1.60%		1.53%		5.42%		5.34%		0.52%	
RMSE (root mean square error)			18.41		18.25		21.22		21.20		22.44	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Facility - 36 Month

Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-16	51,926	\$311.53	\$274.64		\$275.48							
Dec-16	51,220	\$301.27	\$275.14		\$275.99						\$311.53	
Jan-17	54,466	\$276.58	\$275.67		\$276.52						\$307.95	
Feb-17	54,376	\$253.40	\$276.19		\$277.04						\$296.99	
Mar-17	54,286	\$261.20	\$276.67		\$277.52						\$281.75	
Apr-17	54,315	\$261.18	\$277.19		\$278.05						\$274.55	
May-17	54,511	\$272.85	\$277.71		\$278.56						\$269.84	
Jun-17	54,564	\$265.26	\$278.23		\$279.08						\$270.85	
Jul-17	54,781	\$309.21	\$278.75		\$279.59						\$268.86	
Aug-17	54,843	\$236.42	\$279.28		\$280.12						\$282.91	
Sep-17	54,384	\$262.14	\$279.81		\$280.65						\$266.64	
Oct-17	54,362	\$292.42	\$280.33	\$277.49	\$281.16	\$278.34					\$265.03	
Nov-17	54,513	\$288.40	\$280.86	\$278.00	\$281.68	\$278.85	\$311.53		\$311.53		\$274.55	\$280.80
Dec-17	54,478	\$316.92	\$281.38	\$278.51	\$282.19	\$279.35	\$300.78		\$300.53		\$279.35	\$278.27
Jan-18	52,507	\$297.59	\$281.91	\$279.02	\$282.72	\$279.86	\$276.24		\$276.05		\$292.44	\$276.93
Feb-18	52,433	\$294.54	\$282.45	\$279.53	\$283.25	\$280.37	\$253.45		\$253.47		\$294.22	\$276.65
Mar-18	52,332	\$259.13	\$282.94	\$280.05	\$283.72	\$280.87	\$262.33		\$262.79		\$294.31	\$277.65
Apr-18	52,560	\$295.32	\$283.48	\$280.56	\$284.25	\$281.39	\$262.86		\$263.41		\$282.01	\$278.26
May-18	52,733	\$271.99	\$284.00	\$281.09	\$284.76	\$281.90	\$275.96		\$276.81		\$286.63	\$279.66
Jun-18	52,720	\$266.88	\$284.54	\$281.61	\$285.29	\$282.42	\$269.15		\$270.20		\$281.49	\$280.56
Jul-18	53,446	\$266.21	\$285.06	\$282.15	\$285.80	\$282.94	\$314.74		\$315.11		\$276.36	\$281.21
Aug-18	53,468	\$266.07	\$285.61	\$282.68	\$286.32	\$283.47	\$240.63		\$241.78		\$272.78	\$280.36
Sep-18	53,278	\$309.27	\$286.15	\$283.21	\$286.85	\$283.99	\$267.85				\$270.40	\$280.69
Oct-18	53,566	\$284.91	\$286.68	\$283.75	\$287.36	\$284.51	\$300.62	\$278.21	\$300.92	\$278.64	\$283.93	\$282.30
Nov-18	53,900	\$282.84	\$287.22	\$284.29	\$287.89	\$285.04	\$312.51	\$278.26	\$312.37	\$278.68	\$284.25	\$283.13
Dec-18	53,803	\$323.57	\$287.75	\$284.83	\$288.40	\$285.57	\$317.41	\$279.64	\$316.52	\$280.00	\$283.73	\$283.50
Jan-19	54,540	\$297.87	\$288.30	\$285.37	\$288.92	\$286.09	\$294.83	\$281.22	\$294.56	\$281.57	\$297.62	\$283.97
Feb-19	54,495	\$295.40	\$288.85	\$285.90	\$289.45	\$286.61	\$279.19	\$283.32	\$279.28	\$283.68	\$297.69	\$284.30
Mar-19	54,459	\$302.63	\$289.35	\$286.44	\$289.93	\$287.12	\$271.55	\$284.03	\$272.15	\$284.40	\$296.88	\$284.55
Apr-19	54,100	\$272.02	\$289.90	\$286.97	\$290.45	\$287.64	\$286.90	\$286.00	\$286.99	\$286.33	\$298.87	\$285.96
May-19	53,986	\$284.05	\$290.43	\$287.50	\$290.96	\$288.15	\$286.27	\$286.84	\$286.26	\$287.10	\$289.48	\$286.20
Jun-19	53,631	\$299.13	\$290.99	\$288.03	\$291.49	\$288.66	\$280.08	\$287.72	\$280.34	\$287.92	\$287.57	\$286.70
Jul-19	52,969	\$304.12	\$291.52	\$288.56	\$292.00	\$289.17	\$310.62	\$287.37	\$309.53	\$287.44	\$291.58	\$287.95
Aug-19	52,672	\$271.78	\$292.08	\$289.10	\$292.53	\$289.68	\$262.79	\$289.23	\$264.52	\$289.35	\$295.94	\$289.86
Sep-19	52,492	\$267.79	\$292.63	\$289.63	\$293.05	\$290.19	\$298.02	\$291.71	\$297.74	\$291.75	\$287.49	\$291.28
Oct-19	52,336	\$320.69	\$293.17	\$290.16	\$293.56	\$290.70	\$309.39	\$292.41	\$307.97	\$292.30	\$280.59	\$291.02
Nov-19	52,336		\$293.73	\$290.70	\$294.09	\$291.21	\$316.93	\$292.72	\$315.24	\$292.49	\$294.56	\$291.88
Dec-19	52,336		\$294.27	\$291.24	\$294.60	\$291.72	\$336.81	\$294.25	\$333.78	\$293.84	\$294.54	\$292.78
Jan-20	52,336		\$294.83	\$291.78	\$295.13	\$292.24	\$312.14	\$295.67	\$310.82	\$295.17	\$294.53	\$292.51
Feb-20	52,336		\$295.40	\$292.33	\$295.65	\$292.76	\$301.07	\$297.53	\$300.57	\$296.98	\$294.51	\$292.23
Mar-20	52,336		\$295.92	\$292.89	\$296.15	\$293.29	\$298.75	\$299.86	\$298.57	\$299.24	\$294.50	\$292.02
Apr-20	52,336		\$296.49	\$293.44	\$296.67	\$293.81	\$296.52	\$300.69	\$296.18	\$300.04	\$294.48	\$291.63
May-20	52,336		\$297.03	\$294.00	\$297.18	\$294.33	\$300.90	\$301.94	\$300.37	\$301.25	\$294.46	\$292.05
Jun-20	52,336		\$297.60	\$294.55	\$297.71	\$294.86	\$302.63	\$303.86	\$302.15	\$303.10	\$294.45	\$292.64
Jul-20	52,336		\$298.15	\$295.11	\$298.22	\$295.38	\$324.42	\$305.01	\$322.01	\$304.14	\$294.43	\$292.87
Aug-20	52,336		\$298.71	\$295.66	\$298.75	\$295.90	\$279.99	\$306.46	\$281.56	\$305.58	\$294.42	\$292.75
Sep-20	52,336		\$299.28	\$296.22	\$299.27	\$296.42	\$301.46	\$306.75	\$300.92	\$305.85	\$294.40	\$293.32
Oct-20	52,336		\$299.83	\$296.77	\$299.78	\$296.93	\$329.91	\$308.46	\$327.35	\$307.46	\$294.38	\$294.47
Nov-20	52,336		\$300.41	\$297.33	\$300.31	\$297.45	\$333.26	\$309.82	\$329.77	\$308.67	\$294.37	\$294.46
Dec-20	52,336		\$300.96	\$297.88	\$300.82	\$297.97	\$354.09	\$311.26	\$348.31	\$309.88	\$294.35	\$294.44
Jan-21	52,336		\$301.53	\$298.44	\$301.35	\$298.49	\$328.09	\$312.59	\$325.35	\$311.09	\$294.34	\$294.42
Feb-21	52,336		\$302.11	\$299.00	\$301.87	\$299.01	\$316.39	\$313.87	\$315.10	\$312.30	\$294.32	\$294.41
Mar-21	52,336		\$302.63	\$299.56	\$302.35	\$299.52	\$313.89	\$315.13	\$313.10	\$313.51	\$294.30	\$294.39
Apr-21	52,336		\$303.20	\$300.12	\$302.88	\$300.04	\$311.48	\$316.38	\$310.71	\$314.73	\$294.29	\$294.38
May-21	52,336		\$303.76	\$300.68	\$303.39	\$300.56	\$316.02	\$317.64	\$314.90	\$315.94	\$294.27	\$294.36
Jun-21	52,336		\$304.34	\$301.24	\$303.91	\$301.08	\$317.77	\$318.90	\$316.68	\$317.15	\$294.25	\$294.34
Jul-21	52,336		\$304.90	\$301.81	\$304.42	\$301.59	\$340.58	\$320.24	\$336.54	\$318.36	\$294.24	\$294.33
Aug-21	52,336		\$305.48	\$302.37	\$304.95	\$302.11	\$293.88	\$321.40	\$296.09	\$319.57	\$294.22	\$294.31
Sep-21	52,336		\$306.06	\$302.93	\$305.48	\$302.63	\$316.36	\$322.64	\$315.45	\$320.78	\$294.21	\$294.30
Oct-21	52,336		\$306.63	\$303.50	\$305.99	\$303.14	\$346.15	\$324.00	\$341.88	\$321.99	\$294.19	\$294.28
Nov-21	52,336		\$307.21	\$304.07	\$306.51	\$303.66	\$349.60	\$325.36	\$344.30	\$323.20	\$294.17	\$294.26
Dec-21	52,336		\$307.78	\$304.64	\$307.02	\$304.18	\$371.38	\$326.80	\$362.84	\$324.41	\$294.16	\$294.25
Utilization Trend			2.27%		2.11%		5.27%		4.93%		0.51%	
RMSE (root mean square error)			18.22		18.11		23.18		23.05		23.04	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Facility - 24 Month

Month	Membership	Adjusted Allowed Claims PMPM	Utilization Trend Calculation - Facility - 24 Month									
			Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-17	54,513	\$288.40	\$285.76		286.28627							
Dec-17	54,478	\$316.92	\$286.00		\$286.53						\$288.40	
Jan-18	52,507	\$297.59	\$286.25		\$286.78						\$288.43	
Feb-18	52,433	\$294.54	\$286.50		\$287.04						\$288.44	
Mar-18	52,332	\$259.13	\$286.72		\$287.26						\$288.45	
Apr-18	52,560	\$295.32	\$286.97		\$287.52						\$288.42	
May-18	52,733	\$271.99	\$287.21		\$287.76						\$288.43	
Jun-18	52,720	\$266.88	\$287.46		\$288.01						\$288.41	
Jul-18	53,446	\$266.21	\$287.70		\$288.26						\$288.39	
Aug-18	53,468	\$266.07	\$287.94		\$288.51						\$288.37	
Sep-18	53,278	\$309.27	\$288.19		\$288.76						\$288.34	
Oct-18	53,566	\$284.91	\$288.43	\$287.09	\$289.01	\$287.64					\$288.36	
Nov-18	53,900	\$282.84	\$288.68	\$287.34	\$289.26	\$287.89	\$288.40		\$288.40		\$288.36	\$288.40
Dec-18	53,803	\$323.57	\$288.92	\$287.59	\$289.50	\$288.15	\$316.77		\$316.73		\$288.36	\$288.40
Jan-19	54,540	\$297.87	\$289.17	\$287.83	\$289.76	\$288.40	\$297.54		\$297.54		\$288.39	\$288.39
Feb-19	54,495	\$295.40	\$289.42	\$288.08	\$290.01	\$288.65	\$294.50		\$294.52		\$288.40	\$288.39
Mar-19	54,459	\$302.63	\$289.65	\$288.32	\$290.24	\$288.89	\$259.13		\$259.17		\$288.41	\$288.39
Apr-19	54,100	\$272.02	\$289.90	\$288.57	\$290.49	\$289.14	\$296.55		\$296.91		\$288.42	\$288.39
May-19	53,986	\$284.05	\$290.14	\$288.81	\$290.73	\$289.38	\$273.15		\$273.51		\$288.41	\$288.39
Jun-19	53,631	\$299.13	\$290.39	\$289.05	\$290.99	\$289.63	\$268.57		\$269.13		\$288.40	\$288.38
Jul-19	52,969	\$304.12	\$290.64	\$289.29	\$291.23	\$289.87	\$269.07		\$270.05		\$288.41	\$288.39
Aug-19	52,672	\$271.78	\$290.89	\$289.53	\$291.48	\$290.12	\$270.58		\$272.15		\$288.43	\$288.39
Sep-19	52,492	\$267.79	\$291.14	\$289.77	\$291.73	\$290.36	\$315.97		\$317.00		\$288.41	\$288.40
Oct-19	52,336	\$320.69	\$291.38	\$290.02	\$291.98	\$290.61	\$291.33	\$286.78	\$292.59	\$287.28	\$288.39	\$288.40
Nov-19	52,336		\$291.63	\$290.26	\$292.23	\$290.85	\$290.78	\$286.97	\$292.39	\$287.60	\$288.42	\$288.40
Dec-19	52,336		\$291.88	\$290.51	\$292.48	\$291.10	\$333.93	\$288.30	\$334.37	\$288.98	\$288.42	\$288.41
Jan-20	52,336		\$292.13	\$290.75	\$292.73	\$291.35	\$308.60	\$289.18	\$309.93	\$289.97	\$288.42	\$288.41
Feb-20	52,336		\$292.38	\$291.00	\$292.98	\$291.60	\$307.20	\$290.20	\$308.71	\$291.12	\$288.42	\$288.41
Mar-20	52,336		\$292.62	\$291.25	\$293.22	\$291.85	\$315.22	\$294.94	\$316.38	\$295.95	\$288.42	\$288.41
Apr-20	52,336		\$292.87	\$291.50	\$293.47	\$292.10	\$284.18	\$293.91	\$286.76	\$295.11	\$288.42	\$288.41
May-20	52,336		\$293.11	\$291.75	\$293.71	\$292.35	\$297.38	\$295.98	\$299.50	\$297.32	\$288.42	\$288.41
Jun-20	52,336		\$293.37	\$292.00	\$293.97	\$292.60	\$313.40	\$299.76	\$314.77	\$301.17	\$288.42	\$288.42
Jul-20	52,336		\$293.61	\$292.25	\$294.21	\$292.85	\$318.38	\$303.90	\$319.38	\$305.31	\$288.42	\$288.42
Aug-20	52,336		\$293.87	\$292.50	\$294.46	\$293.10	\$284.32	\$305.06	\$286.71	\$306.54	\$288.42	\$288.42
Sep-20	52,336		\$294.12	\$292.75	\$294.72	\$293.35	\$280.50	\$302.10	\$283.26	\$303.73	\$288.42	\$288.42
Oct-20	52,336		\$294.37	\$293.00	\$294.96	\$293.59	\$335.76	\$305.80	\$336.08	\$307.35	\$288.42	\$288.42
Nov-20	52,336		\$294.62	\$293.25	\$295.21	\$293.84	\$304.42	\$306.94	\$307.81	\$308.64	\$288.42	\$288.42
Dec-20	52,336		\$294.87	\$293.49	\$295.46	\$294.09	\$349.53	\$308.24	\$349.79	\$309.92	\$288.42	\$288.42
Jan-21	52,336		\$295.12	\$293.74	\$295.71	\$294.34	\$322.96	\$309.44	\$325.35	\$311.21	\$288.42	\$288.42
Feb-21	52,336		\$295.38	\$293.99	\$295.96	\$294.59	\$321.44	\$310.62	\$324.13	\$312.49	\$288.42	\$288.42
Mar-21	52,336		\$295.61	\$294.24	\$296.19	\$294.84	\$329.78	\$311.84	\$331.80	\$313.78	\$288.42	\$288.42
Apr-21	52,336		\$295.86	\$294.49	\$296.44	\$295.08	\$297.25	\$312.93	\$302.18	\$315.06	\$288.42	\$288.42
May-21	52,336		\$296.11	\$294.74	\$296.69	\$295.33	\$311.00	\$314.06	\$314.92	\$316.35	\$288.42	\$288.42
Jun-21	52,336		\$296.37	\$294.99	\$296.94	\$295.58	\$327.71	\$315.25	\$330.19	\$317.63	\$288.42	\$288.42
Jul-21	52,336		\$296.61	\$295.24	\$297.18	\$295.83	\$332.85	\$316.46	\$334.80	\$318.92	\$288.42	\$288.42
Aug-21	52,336		\$296.87	\$295.49	\$297.44	\$296.07	\$297.20	\$317.53	\$302.13	\$320.20	\$288.42	\$288.42
Sep-21	52,336		\$297.13	\$295.74	\$297.69	\$296.32	\$293.16	\$318.59	\$298.68	\$321.49	\$288.42	\$288.42
Oct-21	52,336		\$297.37	\$295.99	\$297.93	\$296.57	\$350.85	\$319.85	\$351.50	\$322.77	\$288.42	\$288.42
Nov-21	52,336		\$297.63	\$296.24	\$298.18	\$296.82	\$318.06	\$320.98	\$323.23	\$324.06	\$288.42	\$288.42
Dec-21	52,336		\$297.88	\$296.49	\$298.43	\$297.06	\$365.13	\$322.28	\$365.21	\$325.34	\$288.42	\$288.42
Utilization Trend			1.02%		1.02%		5.54%		5.91%		0.00%	
RMSE (root mean square error)			18.02		17.92		25.88		25.77		18.67	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Professional - 48 Month

Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-15	57,692	\$138.69	\$125.28		\$125.38							
Dec-15	57,890	\$126.86	\$125.54		\$125.65						\$138.69	
Jan-16	52,944	\$127.21	\$125.80		\$125.92						\$131.16	
Feb-16	52,655	\$126.25	\$126.07		\$126.20						\$128.63	
Mar-16	52,655	\$120.68	\$126.32		\$126.45						\$127.11	
Apr-16	52,628	\$121.65	\$126.58		\$126.73						\$123.00	
May-16	52,040	\$125.21	\$126.84		\$126.99						\$122.12	
Jun-16	52,000	\$122.52	\$127.11		\$127.27						\$124.07	
Jul-16	51,849	\$117.22	\$127.37		\$127.54						\$123.07	
Aug-16	51,743	\$117.81	\$127.64		\$127.81						\$119.33	
Sep-16	51,752	\$128.51	\$127.90		\$128.09						\$118.34	
Oct-16	51,944	\$131.79	\$128.16	\$126.69	\$128.35	\$126.84					\$124.80	
Nov-16	51,926	\$141.71	\$128.43	\$126.96	\$128.63	\$127.12	\$138.69		\$138.69		\$129.24	
Dec-16	51,220	\$137.09	\$128.70	\$127.24	\$128.89	\$127.40	\$127.05		\$127.07		\$137.17	
Jan-17	54,466	\$131.98	\$128.97	\$127.51	\$129.17	\$127.68	\$128.18		\$128.23		\$137.12	
Feb-17	54,376	\$122.58	\$129.24	\$127.78	\$129.44	\$127.95	\$127.92		\$128.00		\$133.84	
Mar-17	54,286	\$123.58	\$129.48	\$128.05	\$129.69	\$128.23	\$122.46		\$122.64		\$126.66	
Apr-17	54,315	\$129.27	\$129.76	\$128.32	\$129.97	\$128.50	\$123.89		\$124.07		\$124.69	
May-17	54,511	\$130.10	\$130.02	\$128.58	\$130.23	\$128.77	\$128.32		\$128.44		\$127.59	
Jun-17	54,564	\$124.99	\$130.30	\$128.85	\$130.51	\$129.05	\$126.28		\$126.48		\$129.18	
Jul-17	54,781	\$132.88	\$130.56	\$129.12	\$130.77	\$129.32	\$121.35		\$121.75		\$126.50	
Aug-17	54,843	\$118.57	\$130.84	\$129.38	\$131.05	\$129.58	\$123.35		\$123.75		\$130.55	
Sep-17	54,384	\$130.44	\$131.11	\$129.65	\$131.32	\$129.85	\$135.26		\$135.09		\$122.91	
Oct-17	54,362	\$133.33	\$131.38	\$129.91	\$131.59	\$130.12	\$139.30	\$128.46	\$138.88	\$128.55	\$127.69	\$129.39
Nov-17	54,513	\$144.00	\$131.65	\$130.17	\$131.86	\$130.38	\$148.31	\$129.31	\$147.29	\$129.31	\$131.27	\$129.56
Dec-17	54,478	\$136.47	\$131.92	\$130.44	\$132.13	\$130.65	\$139.20	\$130.31	\$138.56	\$130.26	\$139.37	\$129.78
Jan-18	52,507	\$137.07	\$132.20	\$130.70	\$132.41	\$130.91	\$136.96	\$131.03	\$136.55	\$130.94	\$137.53	\$129.79
Feb-18	52,433	\$137.20	\$132.48	\$130.97	\$132.68	\$131.18	\$132.14	\$131.38	\$132.17	\$131.28	\$137.23	\$130.05
Mar-18	52,332	\$131.45	\$132.73	\$131.23	\$132.93	\$131.44	\$129.73	\$131.99	\$129.86	\$131.89	\$137.21	\$130.92
Apr-18	52,560	\$134.77	\$133.01	\$131.50	\$133.20	\$131.71	\$133.27	\$132.77	\$133.16	\$132.65	\$133.54	\$131.65
May-18	52,733	\$136.62	\$133.28	\$131.77	\$133.47	\$131.98	\$136.12	\$133.43	\$135.92	\$133.27	\$134.32	\$132.22
Jun-18	52,720	\$129.44	\$133.56	\$132.05	\$133.74	\$132.25	\$132.44	\$133.95	\$132.59	\$133.80	\$135.78	\$132.77
Jul-18	53,446	\$130.33	\$133.83	\$132.32	\$134.01	\$132.52	\$132.79	\$134.93	\$132.83	\$134.74	\$131.74	\$132.22
Aug-18	53,468	\$122.69	\$134.12	\$132.60	\$134.29	\$132.79	\$126.46	\$135.22	\$127.09	\$135.05	\$130.84	\$133.25
Sep-18	53,278	\$140.30	\$134.40	\$132.88	\$134.56	\$133.07	\$138.26	\$135.47	\$138.11	\$135.30	\$125.64	\$133.49
Oct-18	53,566	\$139.38	\$134.67	\$133.15	\$134.83	\$133.34	\$141.77	\$135.67	\$141.44	\$135.51	\$134.97	\$134.11
Nov-18	53,900	\$140.20	\$134.96	\$133.43	\$135.10	\$133.62	\$151.69	\$135.94	\$150.69	\$135.78	\$137.77	\$134.66
Dec-18	53,803	\$150.72	\$135.23	\$133.72	\$135.37	\$133.89	\$142.21	\$136.19	\$141.74	\$136.05	\$139.32	\$134.65
Jan-19	54,540	\$136.52	\$135.52	\$133.99	\$135.64	\$134.16	\$141.41	\$136.58	\$141.12	\$136.44	\$146.58	\$135.43
Feb-19	54,495	\$135.15	\$135.80	\$134.27	\$135.92	\$134.43	\$138.17	\$137.07	\$138.15	\$136.94	\$140.18	\$135.69
Mar-19	54,459	\$140.46	\$136.06	\$134.55	\$136.17	\$134.70	\$133.39	\$137.36	\$133.61	\$137.23	\$136.98	\$135.68
Apr-19	54,100	\$134.38	\$136.35	\$134.82	\$136.44	\$134.97	\$136.73	\$137.64	\$136.76	\$137.52	\$139.19	\$136.15
May-19	53,986	\$134.84	\$136.62	\$135.10	\$136.71	\$135.24	\$138.56	\$137.84	\$138.52	\$137.74	\$136.13	\$136.29
Jun-19	53,631	\$134.94	\$136.91	\$135.38	\$136.98	\$135.51	\$132.53	\$137.84	\$132.82	\$137.75	\$135.30	\$136.25
Jul-19	52,969	\$135.34	\$137.19	\$135.65	\$137.25	\$135.77	\$132.86	\$137.85	\$133.06	\$137.77	\$135.07	\$136.53
Aug-19	52,672	\$125.85	\$137.48	\$135.93	\$137.52	\$136.04	\$125.82	\$137.81	\$126.42	\$137.73	\$135.24	\$136.90
Sep-19	52,492	\$129.76	\$137.77	\$136.20	\$137.80	\$136.30	\$140.22	\$137.97	\$140.11	\$137.89	\$129.26	\$137.20
Oct-19	52,336	\$143.89	\$138.05	\$136.48	\$138.06	\$136.57	\$140.84	\$137.89	\$140.67	\$137.82	\$129.57	\$136.77
Nov-19	52,336		\$138.34	\$136.76	\$138.34	\$136.84	\$146.66	\$137.44	\$146.25	\$137.43	\$138.68	\$136.84
Dec-19	52,336		\$138.62	\$137.04	\$138.61	\$137.10	\$146.09	\$137.75	\$145.59	\$137.74	\$138.68	\$136.78
Jan-20	52,336		\$138.91	\$137.33	\$138.88	\$137.38	\$138.97	\$137.54	\$138.74	\$137.53	\$138.68	\$136.10
Feb-20	52,336		\$139.21	\$137.61	\$139.16	\$137.65	\$136.56	\$137.40	\$136.40	\$137.38	\$138.68	\$135.96
Mar-20	52,336		\$139.48	\$137.90	\$139.41	\$137.92	\$136.15	\$137.64	\$135.90	\$137.58	\$138.68	\$136.10
Apr-20	52,336		\$139.77	\$138.19	\$139.69	\$138.19	\$134.95	\$137.50	\$134.70	\$137.42	\$138.68	\$136.05
May-20	52,336		\$140.06	\$138.48	\$139.95	\$138.47	\$136.07	\$137.29	\$135.77	\$137.18	\$138.68	\$136.26
Jun-20	52,336		\$140.35	\$138.77	\$140.23	\$138.74	\$132.73	\$137.32	\$132.46	\$137.16	\$138.68	\$136.54
Jul-20	52,336		\$140.64	\$139.05	\$140.49	\$139.01	\$132.85	\$137.32	\$132.49	\$137.12	\$138.68	\$136.85
Aug-20	52,336		\$140.93	\$139.34	\$140.77	\$139.28	\$124.52	\$137.22	\$124.34	\$136.95	\$138.68	\$137.13
Sep-20	52,336		\$141.23	\$139.63	\$141.04	\$139.55	\$134.08	\$136.71	\$133.80	\$136.43	\$138.68	\$137.92
Oct-20	52,336		\$141.52	\$139.92	\$141.31	\$139.82	\$140.86	\$136.71	\$140.38	\$136.40	\$138.68	\$138.68
Nov-20	52,336		\$141.82	\$140.21	\$141.59	\$140.09	\$145.23	\$136.59	\$144.54	\$136.26	\$138.68	\$138.68
Dec-20	52,336		\$142.11	\$140.50	\$141.85	\$140.36	\$144.66	\$136.47	\$143.87	\$136.12	\$138.68	\$138.68
Jan-21	52,336		\$142.41	\$140.79	\$142.13	\$140.64	\$137.62	\$136.36	\$137.03	\$135.97	\$138.68	\$138.68
Feb-21	52,336		\$142.70	\$141.08	\$142.40	\$140.91	\$135.23	\$136.25	\$134.68	\$135.83	\$138.68	\$138.68
Mar-21	52,336		\$142.98	\$141.38	\$142.65	\$141.18	\$134.82	\$136.14	\$134.18	\$135.69	\$138.69	\$138.68
Apr-21	52,336		\$143.28	\$141.67	\$142.93	\$141.45	\$133.63	\$136.03	\$132.99	\$135.54	\$138.69	\$138.68
May-21	52,336		\$143.57	\$141.96	\$143.19	\$141.72	\$134.73	\$135.91	\$134.06	\$135.40	\$138.69	\$138.68
Jun-21	52,336		\$143.87	\$142.25	\$143.47	\$141.99	\$131.43	\$135.81	\$130.74	\$135.26	\$138.69	\$138.68
Jul-21	52,336		\$144.16	\$142.55	\$143.73	\$142.25	\$131.55	\$135.70	\$130.78	\$135.12	\$138.69	\$138.68
Aug-21	52,336		\$144.47	\$142.84	\$144.01	\$142.52	\$123.30	\$135.60	\$122.62	\$134.97	\$138.69	\$138.69
Sep-21	52,336		\$144.77	\$143.14	\$144.28	\$142.79	\$132.76	\$135.49	\$132.09	\$134.83	\$138.69	\$138.69
Oct-21	52,336		\$145.07	\$143.43	\$144.55	\$143.06	\$139.48	\$135.37	\$138.67	\$134.69	\$138.69	\$138.69
Nov-21	52,336		\$145.37	\$143.73	\$144.82	\$143.33	\$143.80	\$135.25	\$142.82	\$134.54	\$138.69	\$138.69
Dec-21	52,336		\$145.67	\$144.03	\$145.09	\$143.60	\$143.24	\$135.13	\$142.16	\$134.40	\$138.69	\$138.69
Utilization Trend			2.51%		2.35%		-0.93%		-1.15%		0.65%	
RMSE (root mean square error)			6.68		6.66		5.10		4.98		6.82	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Professional - 36 Month

Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-16	51,926	\$141.71	\$130.37		\$130.53							
Dec-16	51,220	\$137.09	\$130.55		\$130.71						\$141.71	
Jan-17	54,466	\$131.98	\$130.74		\$130.91						\$139.24	
Feb-17	54,376	\$122.58	\$130.93		\$131.10						\$135.36	
Mar-17	54,286	\$123.58	\$131.11		\$131.28						\$128.54	
Apr-17	54,315	\$129.27	\$131.30		\$131.47						\$125.88	
May-17	54,511	\$130.10	\$131.48		\$131.66						\$127.67	
Jun-17	54,564	\$124.99	\$131.68		\$131.85						\$128.95	
Jul-17	54,781	\$132.88	\$131.86		\$132.04						\$126.82	
Aug-17	54,843	\$118.57	\$132.06		\$132.23						\$130.04	
Sep-17	54,384	\$130.44	\$132.25		\$132.42						\$123.91	
Oct-17	54,362	\$133.33	\$132.44	\$131.41	\$132.61	\$131.57					\$127.38	
Nov-17	54,513	\$144.00	\$132.63	\$131.59	\$132.80	\$131.76	\$141.71		\$141.71		\$130.54	\$130.45
Dec-17	54,478	\$136.47	\$132.82	\$131.77	\$132.99	\$131.95	\$137.38				\$137.42	\$130.17
Jan-18	52,507	\$137.07	\$133.01	\$131.96	\$133.18	\$132.13	\$132.15		\$132.18		\$137.05	\$129.97
Feb-18	52,433	\$137.20	\$133.20	\$132.15	\$133.38	\$132.32	\$123.33		\$123.49		\$137.05	\$130.09
Mar-18	52,332	\$131.45	\$133.38	\$132.33	\$133.55	\$132.51	\$126.17		\$126.47		\$137.13	\$130.79
Apr-18	52,560	\$134.77	\$133.58	\$132.52	\$133.74	\$132.69	\$132.80		\$132.98		\$134.09	\$131.47
May-18	52,733	\$136.62	\$133.76	\$132.71	\$133.93	\$132.88	\$134.04		\$134.22		\$134.45	\$132.03
Jun-18	52,720	\$129.44	\$133.96	\$132.90	\$134.12	\$133.07	\$129.23		\$129.61		\$135.60	\$132.59
Jul-18	53,446	\$130.33	\$134.15	\$133.09	\$134.31	\$133.26	\$137.58		\$137.64		\$132.31	\$133.06
Aug-18	53,468	\$122.69	\$134.35	\$133.29	\$134.50	\$133.46	\$122.08		\$122.48		\$131.25	\$133.16
Sep-18	53,278	\$140.30	\$134.54	\$133.48	\$134.70	\$133.65	\$134.51		\$134.50		\$126.67	\$133.41
Oct-18	53,566	\$139.38	\$134.73	\$133.67	\$134.88	\$133.84	\$138.38	\$132.50	\$138.35	\$132.64	\$133.93	\$133.97
Nov-18	53,900	\$140.20	\$134.93	\$133.87	\$135.08	\$134.03	\$148.14	\$133.03	\$147.68	\$133.13	\$136.83	\$134.50
Dec-18	53,803	\$150.72	\$135.12	\$134.07	\$135.26	\$134.23	\$141.46	\$133.37	\$141.26	\$133.45	\$138.62	\$134.58
Jan-19	54,540	\$136.52	\$135.32	\$134.26	\$135.46	\$134.42	\$139.38	\$133.99	\$139.27	\$134.05	\$145.08	\$135.27
Feb-19	54,495	\$135.15	\$135.51	\$134.45	\$135.65	\$134.61	\$132.28	\$134.71	\$132.16	\$134.76	\$140.52	\$135.57
Mar-19	54,459	\$140.46	\$135.69	\$134.64	\$135.83	\$134.80	\$131.02	\$135.10	\$131.28	\$135.14	\$137.65	\$135.62
Apr-19	54,100	\$134.38	\$135.89	\$134.84	\$136.02	\$134.99	\$137.33	\$135.47	\$137.55	\$135.52	\$139.15	\$136.04
May-19	53,986	\$134.84	\$136.08	\$135.03	\$136.21	\$135.17	\$138.25	\$135.82	\$138.35	\$135.86	\$136.60	\$136.22
Jun-19	53,631	\$134.94	\$136.28	\$135.22	\$136.40	\$135.36	\$131.85	\$136.03	\$132.23	\$136.07	\$135.65	\$136.22
Jul-19	52,969	\$135.34	\$136.48	\$135.41	\$136.59	\$135.55	\$138.34	\$136.09	\$138.68	\$136.15	\$135.27	\$136.47
Aug-19	52,672	\$125.85	\$136.67	\$135.60	\$136.78	\$135.74	\$125.60	\$136.39	\$126.25	\$136.48	\$135.30	\$136.80
Sep-19	52,492	\$129.76	\$136.87	\$135.79	\$136.97	\$135.92	\$140.06	\$136.85	\$139.84	\$136.91	\$130.25	\$137.11
Oct-19	52,336	\$143.89	\$137.07	\$135.99	\$137.16	\$136.11	\$140.41	\$137.01	\$140.14	\$137.06	\$129.98	\$136.79
Nov-19	52,336		\$137.27	\$136.18	\$137.35	\$136.30	\$147.70	\$136.95	\$147.42	\$137.01	\$137.39	\$136.84
Dec-19	52,336		\$137.46	\$136.37	\$137.54	\$136.49	\$147.50	\$137.43	\$146.84	\$137.46	\$137.38	\$136.73
Jan-20	52,336		\$137.66	\$136.57	\$137.73	\$136.68	\$140.29	\$137.50	\$140.08	\$137.52	\$137.38	\$136.07
Feb-20	52,336		\$137.86	\$136.77	\$137.93	\$136.87	\$135.29	\$137.76	\$134.96	\$137.76	\$137.38	\$135.80
Mar-20	52,336		\$138.05	\$136.96	\$138.11	\$137.06	\$135.73	\$138.17	\$135.39	\$138.13	\$137.37	\$135.77
Apr-20	52,336		\$138.25	\$137.16	\$138.30	\$137.25	\$136.86	\$138.14	\$136.83	\$138.07	\$137.37	\$135.61
May-20	52,336		\$138.45	\$137.36	\$138.49	\$137.44	\$137.95	\$138.11	\$137.90	\$138.03	\$137.36	\$135.67
Jun-20	52,336		\$138.65	\$137.56	\$138.68	\$137.63	\$133.98	\$138.30	\$133.98	\$138.19	\$137.36	\$135.81
Jul-20	52,336		\$138.85	\$137.76	\$138.87	\$137.83	\$138.11	\$138.28	\$138.29	\$138.15	\$137.36	\$135.99
Aug-20	52,336		\$139.05	\$137.96	\$139.06	\$138.02	\$126.66	\$138.38	\$127.10	\$138.23	\$137.35	\$136.16
Sep-20	52,336		\$139.25	\$138.16	\$139.25	\$138.21	\$137.75	\$138.19	\$137.97	\$138.08	\$137.35	\$136.75
Oct-20	52,336		\$139.45	\$138.36	\$139.44	\$138.40	\$143.87	\$138.47	\$143.58	\$138.36	\$137.34	\$137.37
Nov-20	52,336		\$139.66	\$138.55	\$139.63	\$138.59	\$149.70	\$138.64	\$149.28	\$138.52	\$137.34	\$137.36
Dec-20	52,336		\$139.85	\$138.75	\$139.82	\$138.78	\$149.49	\$138.81	\$148.71	\$138.67	\$137.34	\$137.36
Jan-21	52,336		\$140.06	\$138.95	\$140.02	\$138.97	\$142.18	\$138.96	\$141.94	\$138.83	\$137.33	\$137.35
Feb-21	52,336		\$140.26	\$139.15	\$140.21	\$139.16	\$137.11	\$139.12	\$136.83	\$138.98	\$137.33	\$137.35
Mar-21	52,336		\$140.45	\$139.35	\$140.38	\$139.35	\$137.56	\$139.27	\$137.26	\$139.14	\$137.32	\$137.35
Apr-21	52,336		\$140.65	\$139.55	\$140.58	\$139.54	\$138.70	\$139.42	\$138.70	\$139.30	\$137.32	\$137.34
May-21	52,336		\$140.85	\$139.75	\$140.76	\$139.73	\$139.80	\$139.58	\$139.77	\$139.45	\$137.32	\$137.34
Jun-21	52,336		\$141.06	\$139.95	\$140.96	\$139.92	\$135.78	\$139.73	\$135.85	\$139.61	\$137.31	\$137.33
Jul-21	52,336		\$141.26	\$140.15	\$141.14	\$140.11	\$139.97	\$139.88	\$140.15	\$139.76	\$137.31	\$137.33
Aug-21	52,336		\$141.46	\$140.35	\$141.34	\$140.29	\$128.36	\$140.02	\$128.97	\$139.92	\$137.30	\$137.33
Sep-21	52,336		\$141.67	\$140.56	\$141.53	\$140.48	\$139.59	\$140.18	\$139.83	\$140.07	\$137.30	\$137.32
Oct-21	52,336		\$141.87	\$140.76	\$141.72	\$140.67	\$145.80	\$140.34	\$145.44	\$140.23	\$137.30	\$137.32
Nov-21	52,336		\$142.08	\$140.96	\$141.91	\$140.86	\$151.70	\$140.50	\$151.15	\$140.38	\$137.29	\$137.31
Dec-21	52,336		\$142.28	\$141.16	\$142.10	\$141.05	\$151.48	\$140.67	\$150.57	\$140.54	\$137.29	\$137.31
Utilization Trend			1.74%		1.66%		1.22%		1.16%		0.18%	
RMSE (root mean square error)			6.56		6.54		5.63		5.56		6.91	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Professional - 24 Month

Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-17	54,513	\$144.00	\$136.43		136.52735							
Dec-17	54,478	\$136.47	\$136.37		\$136.47						\$144.00	
Jan-18	52,507	\$137.07	\$136.32		\$136.42						\$140.66	
Feb-18	52,433	\$137.20	\$136.26		\$136.36						\$139.07	
Mar-18	52,332	\$131.45	\$136.21		\$136.31						\$138.23	
Apr-18	52,560	\$134.77	\$136.15		\$136.26						\$135.22	
May-18	52,733	\$136.62	\$136.09		\$136.21						\$135.01	
Jun-18	52,720	\$129.44	\$136.04		\$136.15						\$135.72	
Jul-18	53,446	\$130.33	\$135.98		\$136.10						\$132.93	
Aug-18	53,468	\$122.69	\$135.92		\$136.04						\$131.77	
Sep-18	53,278	\$140.30	\$135.86		\$135.99						\$127.73	
Oct-18	53,566	\$139.38	\$135.81	\$136.12	\$135.93	\$136.23					\$133.29	
Nov-18	53,900	\$140.20	\$135.75	\$136.06	\$135.88	\$136.18	\$144.00		\$144.00		\$135.98	\$135.80
Dec-18	53,803	\$150.72	\$135.69	\$136.00	\$135.83	\$136.12	\$136.45				\$137.84	\$135.27
Jan-19	54,540	\$136.52	\$135.64	\$135.95	\$135.77	\$136.07	\$137.12		\$137.14		\$143.55	\$135.54
Feb-19	54,495	\$135.15	\$135.58	\$135.89	\$135.72	\$136.01	\$137.28		\$137.31		\$140.43	\$135.66
Mar-19	54,459	\$140.46	\$135.53	\$135.83	\$135.67	\$135.96	\$131.54		\$131.58		\$138.09	\$135.66
Apr-19	54,100	\$134.38	\$135.47	\$135.78	\$135.61	\$135.91	\$134.93		\$135.00		\$139.13	\$135.99
May-19	53,986	\$134.84	\$135.41	\$135.72	\$135.56	\$135.85	\$136.83		\$136.92		\$137.02	\$136.15
Jun-19	53,631	\$134.94	\$135.36	\$135.67	\$135.50	\$135.80	\$129.67		\$129.79		\$136.05	\$136.18
Jul-19	52,969	\$135.34	\$135.30	\$135.61	\$135.45	\$135.75	\$130.64		\$130.78		\$135.55	\$136.40
Aug-19	52,672	\$125.85	\$135.24	\$135.55	\$135.40	\$135.69	\$123.05		\$123.25		\$135.45	\$136.70
Sep-19	52,492	\$129.76	\$135.19	\$135.50	\$135.34	\$135.64	\$140.80		\$140.98		\$131.18	\$136.99
Oct-19	52,336	\$143.89	\$135.13	\$135.44	\$135.29	\$135.59	\$139.89	\$135.19	\$140.07	\$135.28	\$130.54	\$136.78
Nov-19	52,336		\$135.07	\$135.39	\$135.23	\$135.53	\$140.90	\$134.92	\$141.01	\$135.01	\$136.45	\$136.82
Dec-19	52,336		\$135.02	\$135.33	\$135.18	\$135.48	\$151.03	\$136.11	\$151.55	\$136.25	\$136.44	\$136.70
Jan-20	52,336		\$134.96	\$135.27	\$135.12	\$135.42	\$137.18	\$136.11	\$137.40	\$136.26	\$136.43	\$136.09
Feb-20	52,336		\$134.90	\$135.22	\$135.07	\$135.37	\$135.89	\$135.99	\$136.07	\$136.16	\$136.42	\$135.75
Mar-20	52,336		\$134.85	\$135.16	\$135.02	\$135.32	\$140.94	\$136.78	\$141.38	\$136.98	\$136.42	\$135.60
Apr-20	52,336		\$134.79	\$135.10	\$134.96	\$135.26	\$135.09	\$136.80	\$135.32	\$137.02	\$136.41	\$135.37
May-20	52,336		\$134.74	\$135.05	\$134.91	\$135.21	\$135.61	\$136.70	\$135.80	\$136.92	\$136.40	\$135.31
Jun-20	52,336		\$134.68	\$134.99	\$134.85	\$135.15	\$135.53	\$137.20	\$135.90	\$137.45	\$136.39	\$135.34
Jul-20	52,336		\$134.62	\$134.93	\$134.80	\$135.10	\$135.93	\$137.65	\$136.27	\$137.91	\$136.39	\$135.41
Aug-20	52,336		\$134.57	\$134.88	\$134.75	\$135.04	\$126.42	\$137.93	\$126.76	\$138.21	\$136.38	\$135.49
Sep-20	52,336		\$134.51	\$134.82	\$134.69	\$134.99	\$130.73	\$137.10	\$130.70	\$137.35	\$136.37	\$135.92
Oct-20	52,336		\$134.45	\$134.76	\$134.64	\$134.94	\$144.53	\$137.48	\$144.81	\$137.75	\$136.37	\$136.41
Nov-20	52,336		\$134.40	\$134.71	\$134.58	\$134.88	\$141.63	\$137.54	\$141.93	\$137.82	\$136.36	\$136.40
Dec-20	52,336		\$134.34	\$134.65	\$134.53	\$134.83	\$151.81	\$137.61	\$152.47	\$137.90	\$136.35	\$136.39
Jan-21	52,336		\$134.28	\$134.59	\$134.47	\$134.77	\$137.90	\$137.67	\$138.32	\$137.98	\$136.34	\$136.38
Feb-21	52,336		\$134.23	\$134.54	\$134.42	\$134.72	\$136.59	\$137.73	\$137.00	\$138.06	\$136.34	\$136.38
Mar-21	52,336		\$134.18	\$134.48	\$134.37	\$134.66	\$141.67	\$137.79	\$142.30	\$138.13	\$136.33	\$136.37
Apr-21	52,336		\$134.12	\$134.43	\$134.31	\$134.61	\$135.79	\$137.85	\$136.25	\$138.21	\$136.32	\$136.36
May-21	52,336		\$134.06	\$134.37	\$134.26	\$134.56	\$136.31	\$137.90	\$136.72	\$138.29	\$136.31	\$136.35
Jun-21	52,336		\$134.01	\$134.31	\$134.21	\$134.50	\$136.23	\$137.96	\$136.82	\$138.36	\$136.31	\$136.35
Jul-21	52,336		\$133.95	\$134.26	\$134.15	\$134.45	\$136.63	\$138.02	\$137.20	\$138.44	\$136.30	\$136.34
Aug-21	52,336		\$133.89	\$134.20	\$134.10	\$134.39	\$127.08	\$138.08	\$127.68	\$138.52	\$136.29	\$136.33
Sep-21	52,336		\$133.84	\$134.15	\$134.04	\$134.34	\$131.41	\$138.13	\$131.62	\$138.59	\$136.28	\$136.33
Oct-21	52,336		\$133.78	\$134.09	\$133.99	\$134.29	\$145.28	\$138.19	\$145.73	\$138.67	\$136.28	\$136.32
Nov-21	52,336		\$133.73	\$134.03	\$133.93	\$134.23	\$142.37	\$138.26	\$142.86	\$138.75	\$136.27	\$136.31
Dec-21	52,336		\$133.67	\$133.98	\$133.88	\$134.18	\$152.60	\$138.32	\$153.40	\$138.83	\$136.26	\$136.30
Utilization Trend			-0.50%		-0.48%		1.06%		1.20%		-0.16%	
RMSE (root mean square error)			6.24		6.21		6.47		6.47		6.64	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Total - 48 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-15	57,692	\$455.41	\$398.74		\$399.35							
Dec-15	57,890	\$398.88	\$399.35		\$399.98						\$455.41	
Jan-16	52,944	\$409.21	\$399.99		\$400.64						\$430.62	
Feb-16	52,655	\$411.11	\$400.62		\$401.29						\$421.20	
Mar-16	52,655	\$383.78	\$401.21		\$401.90						\$416.74	
Apr-16	52,628	\$392.17	\$401.85		\$402.55						\$402.25	
May-16	52,040	\$381.51	\$402.46		\$403.19						\$397.77	
Jun-16	52,000	\$389.46	\$403.10		\$403.84						\$390.58	
Jul-16	51,849	\$389.53	\$403.72		\$404.47						\$390.02	
Aug-16	51,743	\$370.95	\$404.36		\$405.12						\$389.74	
Sep-16	51,752	\$431.61	\$405.00		\$405.78						\$381.43	
Oct-16	51,944	\$417.55	\$405.62	\$402.10	\$406.41	\$402.81					\$403.37	
Nov-16	51,926	\$453.23	\$406.26	\$402.75	\$407.06	\$403.47	\$455.41		\$455.41		\$409.54	
Dec-16	51,220	\$438.36	\$406.88	\$403.40	\$407.69	\$404.14	\$398.83			\$398.81	\$428.66	
Jan-17	54,466	\$408.56	\$407.53	\$404.05	\$408.35	\$404.80	\$410.04		\$410.24		\$432.89	
Feb-17	54,376	\$375.98	\$408.17	\$404.70	\$409.00	\$405.46	\$412.34		\$412.54		\$422.19	
Mar-17	54,286	\$384.78	\$408.76	\$405.34	\$409.59	\$406.12	\$384.56		\$384.61		\$401.89	
Apr-17	54,315	\$390.45	\$409.41	\$405.98	\$410.24	\$406.77	\$392.98		\$392.99		\$394.33	
May-17	54,511	\$402.95	\$410.03	\$406.61	\$410.88	\$407.41	\$382.26		\$382.25		\$392.57	
Jun-17	54,564	\$390.25	\$410.68	\$407.25	\$411.53	\$408.06	\$390.68		\$390.75		\$397.06	
Jul-17	54,781	\$442.08	\$411.31	\$407.88	\$412.16	\$408.70	\$390.95		\$391.01		\$394.02	
Aug-17	54,843	\$354.99	\$411.96	\$408.51	\$412.81	\$409.34	\$373.59		\$374.07		\$415.04	
Sep-17	54,384	\$392.58	\$412.62	\$409.14	\$413.47	\$409.97	\$435.06		\$435.02		\$388.66	
Oct-17	54,362	\$425.75	\$413.25	\$409.77	\$414.10	\$410.60	\$420.58	\$403.74	\$420.35	\$403.80	\$390.31	\$405.47
Nov-17	54,513	\$432.41	\$413.90	\$410.39	\$414.75	\$411.23	\$458.10	\$404.17	\$457.55	\$404.19	\$405.79	\$405.17
Dec-17	54,478	\$453.39	\$414.54	\$411.01	\$415.38	\$411.86	\$418.14	\$405.75	\$417.62	\$405.73	\$417.42	\$404.35
Jan-18	52,507	\$434.66	\$415.19	\$411.64	\$416.04	\$412.49	\$412.23	\$405.91	\$411.84	\$405.84	\$433.16	\$404.29
Feb-18	52,433	\$431.74	\$415.85	\$412.27	\$416.69	\$413.12	\$400.44	\$404.93	\$400.30	\$404.83	\$433.80	\$405.17
Mar-18	52,332	\$390.58	\$416.45	\$412.90	\$417.28	\$413.75	\$389.27	\$405.38	\$389.51	\$405.29	\$432.87	\$407.68
Apr-18	52,560	\$430.08	\$417.10	\$413.54	\$417.93	\$414.38	\$397.54	\$405.78	\$397.74	\$405.71	\$414.30	\$409.34
May-18	52,733	\$408.61	\$417.74	\$414.18	\$418.57	\$415.02	\$398.06	\$407.14	\$398.49	\$407.10	\$421.18	\$411.73
Jun-18	52,720	\$396.32	\$418.41	\$414.82	\$419.22	\$415.66	\$398.79	\$407.85	\$399.33	\$407.86	\$415.64	\$413.30
Jul-18	53,446	\$396.55	\$419.05	\$415.48	\$419.85	\$416.31	\$421.95	\$410.47	\$421.99	\$410.47	\$407.13	\$414.43
Aug-18	53,468	\$388.75	\$419.71	\$416.13	\$420.50	\$416.96	\$374.19	\$410.60	\$375.24	\$410.65	\$402.44	\$413.38
Sep-18	53,278	\$449.57	\$420.38	\$416.78	\$421.16	\$417.61	\$428.10	\$409.98	\$427.78	\$410.00	\$396.39	\$414.06
Oct-18	53,566	\$424.29	\$421.02	\$417.44	\$421.79	\$418.26	\$435.60	\$411.22	\$435.28	\$411.24	\$419.65	\$416.56
Nov-18	53,900	\$423.04	\$421.69	\$418.10	\$422.44	\$418.91	\$462.26	\$411.53	\$460.91	\$411.48	\$421.65	\$417.91
Dec-18	53,803	\$474.29	\$422.33	\$418.76	\$423.08	\$419.57	\$447.97	\$414.04	\$446.95	\$413.95	\$422.23	\$418.31
Jan-19	54,540	\$434.39	\$423.00	\$419.42	\$423.73	\$420.21	\$437.25	\$416.17	\$436.70	\$416.07	\$445.03	\$419.37
Feb-19	54,495	\$430.55	\$423.67	\$420.07	\$424.38	\$420.86	\$429.20	\$418.57	\$429.00	\$418.46	\$440.36	\$419.98
Mar-19	54,459	\$443.09	\$424.28	\$420.72	\$424.97	\$421.50	\$404.73	\$419.78	\$405.58	\$419.72	\$436.04	\$420.29
Apr-19	54,100	\$406.40	\$424.95	\$421.37	\$425.62	\$422.13	\$427.88	\$422.28	\$428.04	\$422.22	\$439.12	\$422.36
May-19	53,986	\$418.89	\$425.60	\$422.02	\$426.26	\$422.77	\$418.48	\$423.94	\$418.91	\$423.88	\$424.75	\$422.66
Jun-19	53,631	\$434.07	\$426.27	\$422.67	\$426.91	\$423.40	\$413.54	\$425.12	\$414.19	\$425.07	\$422.15	\$423.19
Jul-19	52,969	\$439.46	\$426.93	\$423.32	\$427.54	\$424.03	\$428.30	\$425.65	\$428.26	\$425.59	\$427.35	\$424.85
Aug-19	52,672	\$397.63	\$427.60	\$423.97	\$428.20	\$424.67	\$396.77	\$427.55	\$398.85	\$427.58	\$432.63	\$427.35
Sep-19	52,492	\$397.55	\$428.28	\$424.62	\$428.85	\$425.30	\$456.34	\$429.85	\$455.11	\$429.81	\$417.26	\$429.08
Oct-19	52,336	\$464.58	\$428.94	\$425.27	\$429.48	\$425.93	\$448.78	\$430.91	\$447.44	\$430.78	\$408.58	\$428.20
Nov-19	52,336		\$429.62	\$425.92	\$430.13	\$426.56	\$464.78	\$431.04	\$462.38	\$430.83	\$433.09	\$429.15
Dec-19	52,336		\$430.28	\$426.58	\$430.77	\$427.20	\$478.92	\$433.53	\$476.25	\$433.19	\$433.07	\$430.05
Jan-20	52,336		\$430.96	\$427.25	\$431.42	\$427.84	\$454.93	\$434.97	\$453.42	\$434.55	\$433.05	\$429.02
Feb-20	52,336		\$431.64	\$427.91	\$432.07	\$428.49	\$448.47	\$436.57	\$447.43	\$436.08	\$433.03	\$428.38
Mar-20	52,336		\$432.28	\$428.59	\$432.68	\$429.14	\$438.92	\$439.50	\$438.84	\$438.93	\$433.01	\$428.10
Apr-20	52,336		\$432.96	\$429.26	\$433.34	\$429.79	\$436.47	\$440.25	\$435.97	\$439.62	\$432.99	\$427.56
May-20	52,336		\$433.63	\$429.94	\$433.97	\$430.43	\$436.21	\$441.78	\$435.95	\$441.09	\$432.97	\$428.25
Jun-20	52,336		\$434.31	\$430.61	\$434.62	\$431.08	\$439.57	\$444.00	\$439.30	\$443.23	\$432.95	\$429.16
Jul-20	52,336		\$434.98	\$431.29	\$435.25	\$431.73	\$450.28	\$445.85	\$449.11	\$444.98	\$432.93	\$429.63
Aug-20	52,336		\$435.67	\$431.96	\$435.91	\$432.37	\$412.47	\$447.18	\$413.91	\$446.26	\$432.91	\$429.65
Sep-20	52,336		\$436.36	\$432.63	\$436.56	\$433.02	\$448.20	\$446.50	\$446.51	\$445.54	\$432.89	\$430.96
Oct-20	52,336		\$437.03	\$433.31	\$437.19	\$433.66	\$473.14	\$448.53	\$470.71	\$447.48	\$432.87	\$432.98
Nov-20	52,336		\$437.72	\$433.98	\$437.85	\$434.30	\$482.74	\$450.03	\$478.32	\$448.81	\$432.85	\$432.96
Dec-20	52,336		\$438.39	\$434.66	\$438.48	\$434.95	\$497.38	\$451.57	\$492.20	\$450.14	\$432.83	\$432.94
Jan-21	52,336		\$439.08	\$435.34	\$439.13	\$435.59	\$472.40	\$453.02	\$469.36	\$451.47	\$432.81	\$432.92
Feb-21	52,336		\$439.78	\$436.02	\$439.78	\$436.23	\$465.64	\$454.45	\$463.37	\$452.80	\$432.79	\$432.90
Mar-21	52,336		\$440.41	\$436.69	\$440.37	\$436.87	\$455.67	\$455.85	\$454.78	\$454.12	\$432.77	\$432.88
Apr-21	52,336		\$441.11	\$437.37	\$441.03	\$437.51	\$453.08	\$457.23	\$451.91	\$455.45	\$432.75	\$432.86
May-21	52,336		\$441.78	\$438.05	\$441.66	\$438.15	\$452.76	\$458.61	\$451.90	\$456.78	\$432.73	\$432.84
Jun-21	52,336		\$442.48	\$438.73	\$442.31	\$438.79	\$456.19	\$460.00	\$455.24	\$458.11	\$432.71	\$432.82
Jul-21	52,336		\$443.16	\$439.41	\$442.94	\$439.43	\$467.25	\$461.41	\$465.05	\$459.44	\$432.68	\$432.80
Aug-21	52,336		\$443.86	\$440.10	\$443.60	\$440.08	\$472.97	\$462.70	\$429.85	\$460.77	\$432.66	\$432.78
Sep-21	52,336		\$444.56	\$440.78	\$444.25	\$440.72	\$464.99	\$464.10	\$462.45	\$462.10	\$432.64	\$432.76
Oct-21	52,336		\$445.25	\$441.46	\$444.88	\$441.36	\$490.81	\$465.57	\$486.65	\$463.42	\$432.62	\$432.74
Nov-21	52,336		\$445.95	\$442.15	\$445.54	\$442.00	\$500.71	\$467.07	\$494.27	\$464.75	\$432.60	\$432.72
Dec-21	52,336		\$446.63	\$442.84	\$446.17	\$442.64	\$515.83	\$468.61	\$508.14	\$466.08	\$432.58	\$432.70
Utilization Trend			1.89%		1.79%		3.95%		3.70%		0.48%	
RMSE (root mean square error)			24.07		23.92		25.03		24.91		28.25	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Total - 36 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-16	51,926	\$453.23	\$405.10		\$406.01							
Dec-16	51,220	\$438.36	\$405.79		\$406.70						\$453.23	
Jan-17	54,466	\$408.56	\$406.50		\$407.42						\$447.07	
Feb-17	54,376	\$375.98	\$407.22		\$408.14						\$431.10	
Mar-17	54,286	\$384.78	\$407.87		\$408.79						\$408.23	
Apr-17	54,315	\$390.45	\$408.58		\$409.51						\$398.46	
May-17	54,511	\$402.95	\$409.28		\$410.21						\$395.09	
Jun-17	54,564	\$390.25	\$410.00		\$410.93						\$398.29	
Jul-17	54,781	\$442.08	\$410.70		\$411.63						\$394.90	
Aug-17	54,843	\$354.99	\$411.42		\$412.35						\$414.40	
Sep-17	54,384	\$392.58	\$412.15		\$413.07						\$389.74	
Oct-17	54,362	\$425.75	\$412.85	\$408.99	\$413.77	\$409.91					\$390.85	
Nov-17	54,513	\$432.41	\$413.58	\$409.68	\$414.49	\$410.61	\$453.23		\$453.23		\$405.26	\$410.34
Dec-17	54,478	\$453.39	\$414.28	\$410.37	\$415.18	\$411.29	\$437.83		\$437.65		\$416.46	\$407.49
Jan-18	52,507	\$434.66	\$415.01	\$411.07	\$415.90	\$411.99	\$408.25		\$408.11		\$431.73	\$406.13
Feb-18	52,433	\$431.74	\$415.74	\$411.77	\$416.62	\$412.68	\$376.29		\$376.37		\$432.93	\$406.21
Mar-18	52,332	\$390.58	\$416.40	\$412.47	\$417.27	\$413.38	\$386.82		\$387.33		\$432.42	\$408.15
Apr-18	52,560	\$430.08	\$417.13	\$413.17	\$417.99	\$414.08	\$393.44		\$394.12		\$415.05	\$409.53
May-18	52,733	\$408.61	\$417.85	\$413.89	\$418.69	\$414.78	\$407.93		\$408.90		\$421.25	\$411.71
Jun-18	52,720	\$396.32	\$418.58	\$414.60	\$419.41	\$415.49	\$396.34		\$397.72		\$415.98	\$413.20
Jul-18	53,446	\$396.55	\$419.29	\$415.32	\$420.11	\$416.21	\$450.41		\$451.03		\$407.79	\$414.31
Aug-18	53,468	\$388.75	\$420.03	\$416.05	\$420.83	\$416.92	\$361.68		\$363.60		\$403.09	\$413.37
Sep-18	53,278	\$449.57	\$420.77	\$416.78	\$421.55	\$417.64	\$401.52		\$402.83		\$397.10	\$414.02
Oct-18	53,566	\$424.29	\$421.49	\$417.51	\$422.24	\$418.35	\$437.99	\$409.57	\$438.71	\$410.22	\$418.79	\$416.39
Nov-18	53,900	\$423.04	\$422.23	\$418.24	\$422.96	\$419.07	\$459.38	\$410.05	\$459.72	\$410.73	\$421.04	\$417.74
Dec-18	53,803	\$474.29	\$422.95	\$418.98	\$423.66	\$419.79	\$459.26	\$411.83	\$458.71	\$412.48	\$421.84	\$418.20
Jan-19	54,540	\$434.39	\$423.69	\$419.71	\$424.38	\$420.51	\$434.36	\$414.05	\$434.51	\$414.72	\$443.55	\$419.25
Feb-19	54,495	\$430.55	\$424.44	\$420.44	\$425.10	\$421.21	\$413.43	\$417.08	\$413.89	\$417.79	\$439.74	\$419.87
Mar-19	54,459	\$443.09	\$425.11	\$421.16	\$425.75	\$421.92	\$403.50	\$418.39	\$405.19	\$419.20	\$435.92	\$420.21
Apr-19	54,100	\$406.40	\$425.86	\$421.88	\$426.47	\$422.62	\$425.16	\$421.00	\$425.77	\$421.80	\$438.88	\$422.20
May-19	53,986	\$418.89	\$426.59	\$422.61	\$427.17	\$423.32	\$425.21	\$422.42	\$426.16	\$423.21	\$425.40	\$422.54
Jun-19	53,631	\$434.07	\$427.34	\$423.33	\$427.89	\$424.02	\$413.02	\$423.76	\$414.53	\$424.57	\$422.68	\$423.09
Jul-19	52,969	\$439.46	\$428.07	\$424.05	\$428.59	\$424.72	\$448.49	\$423.59	\$448.98	\$424.39	\$427.37	\$424.70
Aug-19	52,672	\$397.63	\$428.82	\$424.77	\$429.31	\$425.42	\$390.08	\$425.98	\$392.99	\$426.86	\$432.36	\$427.12
Sep-19	52,492	\$397.55	\$429.58	\$425.49	\$430.03	\$426.11	\$440.66	\$429.20	\$440.51	\$429.96	\$417.94	\$428.85
Oct-19	52,336	\$464.58	\$430.31	\$426.22	\$430.72	\$426.81	\$452.01	\$430.32	\$451.37	\$430.97	\$409.46	\$428.11
Nov-19	52,336		\$431.07	\$426.95	\$431.44	\$427.51	\$465.61	\$430.76	\$464.59	\$431.30	\$432.26	\$429.05
Dec-19	52,336		\$431.80	\$427.68	\$432.14	\$428.21	\$487.31	\$432.99	\$484.09	\$433.31	\$432.24	\$429.91
Jan-20	52,336		\$432.56	\$428.42	\$432.86	\$428.92	\$455.10	\$434.68	\$453.92	\$434.90	\$432.22	\$428.94
Feb-20	52,336		\$433.32	\$429.17	\$433.58	\$429.63	\$440.30	\$436.97	\$439.69	\$437.09	\$432.20	\$428.28
Mar-20	52,336		\$434.03	\$429.92	\$434.25	\$430.34	\$438.71	\$439.98	\$438.47	\$439.94	\$432.18	\$427.94
Apr-20	52,336		\$434.80	\$430.67	\$434.97	\$431.06	\$436.64	\$440.98	\$436.47	\$440.87	\$432.16	\$427.36
May-20	52,336		\$435.54	\$431.42	\$435.67	\$431.78	\$441.80	\$442.39	\$441.46	\$442.18	\$432.14	\$427.92
Jun-20	52,336		\$436.31	\$432.18	\$436.39	\$432.49	\$440.07	\$444.71	\$439.72	\$444.33	\$432.12	\$428.72
Jul-20	52,336		\$437.05	\$432.93	\$437.09	\$433.20	\$464.17	\$446.01	\$462.53	\$445.45	\$432.10	\$429.11
Aug-20	52,336		\$437.82	\$433.68	\$437.81	\$433.91	\$409.79	\$447.68	\$411.66	\$447.04	\$432.08	\$429.09
Sep-20	52,336		\$438.59	\$434.43	\$438.53	\$434.62	\$441.53	\$447.75	\$441.04	\$447.08	\$432.06	\$430.27
Oct-20	52,336		\$439.34	\$435.18	\$439.23	\$435.33	\$476.64	\$449.81	\$473.79	\$448.95	\$432.04	\$432.15
Nov-20	52,336		\$440.11	\$435.94	\$439.95	\$436.04	\$485.47	\$451.46	\$481.84	\$450.39	\$432.02	\$432.13
Dec-20	52,336		\$440.86	\$436.69	\$440.64	\$436.75	\$508.02	\$453.19	\$501.35	\$451.83	\$432.00	\$432.11
Jan-21	52,336		\$441.64	\$437.45	\$441.36	\$437.46	\$474.37	\$454.79	\$471.17	\$453.27	\$431.98	\$432.09
Feb-21	52,336		\$442.41	\$438.21	\$442.08	\$438.16	\$458.88	\$456.34	\$456.94	\$454.70	\$431.96	\$432.07
Mar-21	52,336		\$443.12	\$438.96	\$442.73	\$438.87	\$457.16	\$457.88	\$455.72	\$456.14	\$431.94	\$432.05
Apr-21	52,336		\$443.90	\$439.72	\$443.45	\$439.58	\$454.93	\$459.40	\$453.72	\$457.58	\$431.92	\$432.03
May-21	52,336		\$444.65	\$440.48	\$444.15	\$440.28	\$460.25	\$460.94	\$458.71	\$459.02	\$431.90	\$432.01
Jun-21	52,336		\$445.44	\$441.24	\$444.87	\$440.99	\$458.38	\$462.47	\$456.98	\$460.45	\$431.88	\$431.99
Jul-21	52,336		\$446.19	\$442.01	\$445.57	\$441.70	\$483.42	\$464.07	\$479.78	\$461.89	\$431.86	\$431.97
Aug-21	52,336		\$446.98	\$442.77	\$446.29	\$442.40	\$426.73	\$465.48	\$428.91	\$463.33	\$431.84	\$431.95
Sep-21	52,336		\$447.77	\$443.53	\$447.01	\$443.11	\$459.71	\$467.00	\$458.29	\$464.77	\$431.83	\$431.93
Oct-21	52,336		\$448.53	\$444.30	\$447.70	\$443.82	\$496.20	\$468.63	\$491.05	\$466.21	\$431.81	\$431.91
Nov-21	52,336		\$449.32	\$445.07	\$448.42	\$444.52	\$505.33	\$470.28	\$499.09	\$467.64	\$431.79	\$431.89
Dec-21	52,336		\$450.08	\$445.84	\$449.12	\$445.23	\$528.73	\$472.01	\$518.60	\$469.08	\$431.77	\$431.87
Utilization Trend			2.10%		1.97%		4.36%		3.99%		0.40%	
RMSE (root mean square error)			23.98		23.85		27.64		27.38		28.9	

MEDICAL UTILIZATION TREND CALCULATION

Utilization Trend Calculation - Total - 24 Month												
Month	Membership	Adjusted Allowed Claims PMPM	Logistic Regression		Linear Regression		Holt-Winters' Multiplicative		Holt-Winters' Additive		Double Exp Smoothing	
			Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM	Fitted PMPM	Rolling 12 PMPM
Nov-17	54,513	\$432.41	\$422.32		422.81362							
Dec-17	54,478	\$453.39	\$422.50		\$423.00						\$432.41	
Jan-18	52,507	\$434.66	\$422.69		\$423.20						\$433.11	
Feb-18	52,433	\$431.74	\$422.87		\$423.40						\$433.17	
Mar-18	52,332	\$390.58	\$423.04		\$423.58						\$433.12	
Apr-18	52,560	\$430.08	\$423.23		\$423.78						\$431.69	
May-18	52,733	\$408.61	\$423.41		\$423.97						\$431.63	
Jun-18	52,720	\$396.32	\$423.59		\$424.16						\$430.86	
Jul-18	53,446	\$396.55	\$423.77		\$424.36						\$429.70	
Aug-18	53,468	\$388.75	\$423.96		\$424.55						\$428.58	
Sep-18	53,278	\$449.57	\$424.15		\$424.75						\$427.24	
Oct-18	53,566	\$424.29	\$424.33	\$423.32	\$424.94	\$423.87					\$427.98	
Nov-18	53,900	\$423.04	\$424.51	\$423.51	\$425.14	\$424.07	\$432.41		\$432.41		\$427.85	\$430.60
Dec-18	53,803	\$474.29	\$424.70	\$423.69	\$425.33	\$424.27	\$453.17		\$453.10		\$427.69	\$430.20
Jan-19	54,540	\$434.39	\$424.88	\$423.88	\$425.53	\$424.46	\$434.80		\$434.89		\$429.25	\$429.88
Feb-19	54,495	\$430.55	\$425.07	\$424.06	\$425.72	\$424.66	\$431.99		\$432.13		\$429.42	\$429.57
Mar-19	54,459	\$443.09	\$425.24	\$424.24	\$425.90	\$424.85	\$390.89		\$391.10		\$429.45	\$429.27
Apr-19	54,100	\$406.40	\$425.43	\$424.43	\$426.10	\$425.04	\$431.84		\$432.39		\$429.91	\$429.13
May-19	53,986	\$418.89	\$425.61	\$424.61	\$426.29	\$425.24	\$410.46		\$411.07		\$429.12	\$428.92
Jun-19	53,631	\$434.07	\$425.79	\$424.79	\$426.49	\$425.43	\$398.73		\$399.58		\$428.77	\$428.75
Jul-19	52,969	\$439.46	\$425.97	\$424.97	\$426.68	\$425.62	\$400.29		\$401.57		\$428.94	\$428.69
Aug-19	52,672	\$397.63	\$426.16	\$425.15	\$426.88	\$425.81	\$394.23		\$396.19		\$429.29	\$428.75
Sep-19	52,492	\$397.55	\$426.35	\$425.33	\$427.07	\$426.00	\$457.56		\$458.87		\$428.23	\$428.83
Oct-19	52,336	\$464.58	\$426.53	\$425.51	\$427.27	\$426.19	\$432.05	\$422.35	\$433.50	\$423.04	\$427.19	\$428.77
Nov-19	52,336		\$426.72	\$425.70	\$427.46	\$426.38	\$432.51	\$422.34	\$434.27	\$423.17	\$428.44	\$428.82
Dec-19	52,336		\$426.90	\$425.88	\$427.65	\$426.58	\$486.13	\$424.96	\$486.67	\$425.85	\$428.44	\$428.88
Jan-20	52,336		\$427.09	\$426.06	\$427.85	\$426.77	\$446.40	\$425.88	\$447.97	\$426.89	\$428.44	\$428.81
Feb-20	52,336		\$427.28	\$426.25	\$428.05	\$426.97	\$443.62	\$426.81	\$445.35	\$427.96	\$428.43	\$428.73
Mar-20	52,336		\$427.45	\$426.43	\$428.23	\$427.16	\$456.97	\$432.39	\$458.23	\$433.63	\$428.43	\$428.64
Apr-20	52,336		\$427.64	\$426.62	\$428.43	\$427.36	\$419.94	\$431.41	\$422.42	\$432.80	\$428.42	\$428.51
May-20	52,336		\$427.82	\$426.81	\$428.62	\$427.55	\$433.46	\$433.37	\$435.56	\$434.89	\$428.42	\$428.45
Jun-20	52,336		\$428.01	\$426.99	\$428.82	\$427.75	\$449.36	\$437.65	\$450.86	\$439.23	\$428.42	\$428.43
Jul-20	52,336		\$428.19	\$427.18	\$429.01	\$427.95	\$454.64	\$442.22	\$455.79	\$443.78	\$428.41	\$428.38
Aug-20	52,336		\$428.38	\$427.36	\$429.21	\$428.14	\$411.09	\$443.65	\$413.52	\$445.25	\$428.41	\$428.31
Sep-20	52,336		\$428.57	\$427.55	\$429.41	\$428.33	\$411.40	\$439.80	\$413.99	\$441.51	\$428.40	\$428.32
Oct-20	52,336		\$428.75	\$427.73	\$429.60	\$428.53	\$480.60	\$443.84	\$480.93	\$445.46	\$428.40	\$428.42
Nov-20	52,336		\$428.94	\$427.92	\$429.79	\$428.72	\$447.42	\$445.09	\$450.65	\$446.83	\$428.40	\$428.42
Dec-20	52,336		\$429.12	\$428.10	\$429.99	\$428.92	\$502.84	\$446.48	\$503.05	\$448.19	\$428.39	\$428.41
Jan-21	52,336		\$429.31	\$428.29	\$430.18	\$429.11	\$461.70	\$447.75	\$464.35	\$449.56	\$428.39	\$428.41
Feb-21	52,336		\$429.50	\$428.48	\$430.38	\$429.31	\$458.78	\$449.02	\$461.73	\$450.92	\$428.38	\$428.41
Mar-21	52,336		\$429.67	\$428.66	\$430.56	\$429.50	\$472.54	\$450.31	\$474.61	\$452.29	\$428.38	\$428.40
Apr-21	52,336		\$429.86	\$428.85	\$430.76	\$429.69	\$434.21	\$451.50	\$438.80	\$453.65	\$428.38	\$428.40
May-21	52,336		\$430.04	\$429.03	\$430.95	\$429.89	\$448.15	\$452.73	\$451.94	\$455.02	\$428.37	\$428.39
Jun-21	52,336		\$430.23	\$429.22	\$431.14	\$430.08	\$464.55	\$453.99	\$467.24	\$456.38	\$428.37	\$428.39
Jul-21	52,336		\$430.42	\$429.40	\$431.34	\$430.27	\$469.96	\$455.27	\$472.17	\$457.75	\$428.37	\$428.39
Aug-21	52,336		\$430.61	\$429.59	\$431.53	\$430.47	\$424.90	\$456.42	\$429.90	\$459.11	\$428.36	\$428.38
Sep-21	52,336		\$430.80	\$429.77	\$431.73	\$430.66	\$425.18	\$457.57	\$430.38	\$460.48	\$428.36	\$428.38
Oct-21	52,336		\$430.98	\$429.96	\$431.92	\$430.86	\$496.66	\$458.91	\$497.31	\$461.84	\$428.35	\$428.38
Nov-21	52,336		\$431.17	\$430.14	\$432.12	\$431.05	\$462.33	\$460.15	\$467.03	\$463.21	\$428.35	\$428.37
Dec-21	52,336		\$431.35	\$430.33	\$432.31	\$431.24	\$519.55	\$461.54	\$519.43	\$464.57	\$428.35	\$428.37
Utilization Trend			0.52%		0.55%		4.18%		4.42%		-0.04%	
RMSE (root mean square error)			23.54		23.42		30.87		30.73		24.43	

MEDICAL UTILIZATION TREND CALCULATION

Pure Premium Trend - Pharmaceuticals Processed through the Medical Benefit

Month	MONTHLY DATA			ROLLING 12		
	Members	Contract Adjusted Allowed Charges	Total Specialty PMPM	Members	Contract Adjusted Allowed Charges	Rolling 12 PMPM
Nov-15	57,692	\$ 1,929,844	\$33.45			
Dec-15	57,890	\$ 2,090,382	\$36.11			
Jan-16	52,944	\$ 1,642,972	\$31.03			
Feb-16	52,655	\$ 1,672,271	\$31.76			
Mar-16	52,655	\$ 1,721,443	\$32.69			
Apr-16	52,628	\$ 1,588,606	\$30.19			
May-16	52,040	\$ 1,808,895	\$34.76			
Jun-16	52,000	\$ 2,349,159	\$45.18			
Jul-16	51,849	\$ 1,819,940	\$35.10			
Aug-16	51,743	\$ 1,958,948	\$37.86			
Sep-16	51,752	\$ 2,117,894	\$40.92			
Oct-16	51,944	\$ 2,129,461	\$41.00	637,792	\$ 22,829,813	\$35.80
Nov-16	51,926	\$ 2,301,534	\$44.32	632,026	\$ 23,201,503	\$36.71
Dec-16	51,220	\$ 1,755,070	\$34.27	625,356	\$ 22,866,191	\$36.57
Jan-17	54,466	\$ 1,710,079	\$31.40	626,878	\$ 22,933,299	\$36.58
Feb-17	54,376	\$ 1,819,245	\$33.46	628,599	\$ 23,080,273	\$36.72
Mar-17	54,286	\$ 1,863,763	\$34.33	630,230	\$ 23,222,593	\$36.85
Apr-17	54,315	\$ 1,548,511	\$28.51	631,917	\$ 23,182,497	\$36.69
May-17	54,511	\$ 1,982,522	\$36.37	634,388	\$ 23,356,125	\$36.82
Jun-17	54,564	\$ 1,917,788	\$35.15	636,952	\$ 22,924,755	\$35.99
Jul-17	54,781	\$ 1,837,081	\$33.53	639,884	\$ 22,941,895	\$35.85
Aug-17	54,843	\$ 2,110,904	\$38.49	642,984	\$ 23,093,852	\$35.92
Sep-17	54,384	\$ 2,080,184	\$38.25	645,616	\$ 23,056,142	\$35.71
Oct-17	54,362	\$ 2,325,316	\$42.77	648,034	\$ 23,251,997	\$35.88
Nov-17	54,513	\$ 2,377,450	\$43.61	650,621	\$ 23,327,914	\$35.85
Dec-17	54,478	\$ 2,121,689	\$38.95	653,879	\$ 23,694,533	\$36.24
Jan-18	52,507	\$ 2,669,130	\$50.83	651,920	\$ 24,653,584	\$37.82
Feb-18	52,433	\$ 2,215,209	\$42.25	649,977	\$ 25,049,548	\$38.54
Mar-18	52,332	\$ 2,597,267	\$49.63	648,023	\$ 25,783,052	\$39.79
Apr-18	52,560	\$ 2,113,872	\$40.22	646,268	\$ 26,348,413	\$40.77
May-18	52,733	\$ 2,526,707	\$47.92	644,490	\$ 26,892,598	\$41.73
Jun-18	52,720	\$ 2,018,324	\$38.28	642,646	\$ 26,993,134	\$42.00
Jul-18	53,446	\$ 2,331,045	\$43.61	641,311	\$ 27,487,098	\$42.86
Aug-18	53,468	\$ 2,268,543	\$42.43	639,936	\$ 27,644,737	\$43.20
Sep-18	53,278	\$ 2,009,757	\$37.72	638,830	\$ 27,574,310	\$43.16
Oct-18	53,566	\$ 2,335,503	\$43.60	638,034	\$ 27,584,497	\$43.23
Nov-18	53,900	\$ 2,712,278	\$50.32	637,421	\$ 27,919,325	\$43.80
Dec-18	53,803	\$ 2,378,696	\$44.21	636,746	\$ 28,176,332	\$44.25
Jan-19	54,540	\$ 2,648,395	\$48.56	638,779	\$ 28,155,597	\$44.08
Feb-19	54,495	\$ 2,170,804	\$39.83	640,841	\$ 28,111,193	\$43.87
Mar-19	54,459	\$ 2,484,915	\$45.63	642,968	\$ 27,998,841	\$43.55
Apr-19	54,100	\$ 2,451,851	\$45.32	644,508	\$ 28,336,819	\$43.97
May-19	53,986	\$ 2,911,812	\$53.94	645,761	\$ 28,721,924	\$44.48
Jun-19	53,631	\$ 2,466,694	\$45.99	646,672	\$ 29,170,293	\$45.11
Jul-19	52,969	\$ 2,637,390	\$49.79	646,195	\$ 29,476,638	\$45.62
Aug-19	52,672	\$ 2,668,101	\$50.66	645,399	\$ 29,876,196	\$46.29
Sep-19	52,492	\$ 2,728,500	\$51.98	644,613	\$ 30,594,939	\$47.46
Oct-19	52,336	\$ 2,702,579	\$51.64	643,383	\$ 30,962,014	\$48.12

Pure Premium Trend

11.31%

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

EXHIBIT 2C

MEDICAL UTILIZATION TREND CALCULATION
INDUCED UTILIZATION

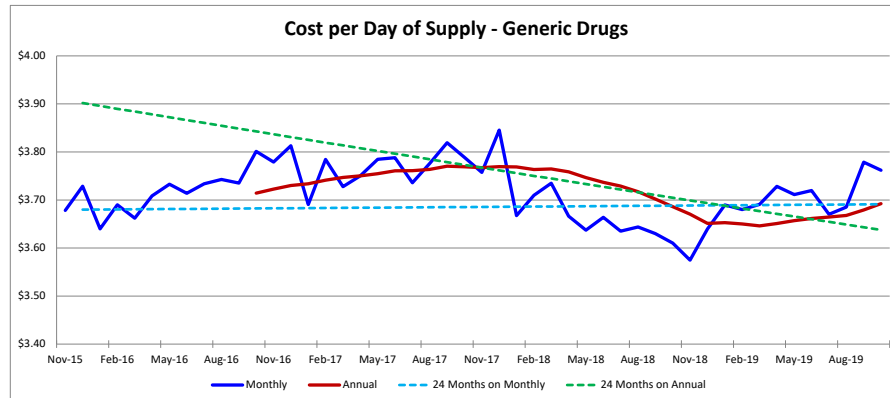
Month	Average Paid to Allowed Ratio	Average Induced Utilization Factor	Normalization Factor for Induced Utilization
Nov-16	0.7295	1.0426	
Dec-16	0.7296	1.0427	
Jan-17	0.7268	1.0415	
Feb-17	0.7260	1.0411	
Mar-17	0.7264	1.0413	
Apr-17	0.7258	1.0410	
May-17	0.7250	1.0406	
Jun-17	0.7249	1.0406	
Jul-17	0.7255	1.0409	
Aug-17	0.7253	1.0408	
Sep-17	0.7245	1.0404	
Oct-17	0.7254	1.0408	
Nov-17	0.7261	1.0411	0.9985
Dec-17	0.7265	1.0413	0.9986
Jan-18	0.7247	1.0405	0.9991
Feb-18	0.7244	1.0403	0.9993
Mar-18	0.7227	1.0396	0.9984
Apr-18	0.7227	1.0396	0.9987
May-18	0.7233	1.0398	0.9993
Jun-18	0.7222	1.0394	0.9989
Jul-18	0.7220	1.0393	0.9985
Aug-18	0.7224	1.0394	0.9987
Sep-18	0.7224	1.0394	0.9991
Oct-18	0.7226	1.0395	0.9988
Nov-18	0.7228	1.0396	0.9986
Dec-18	0.7239	1.0401	0.9989
Jan-19	0.7264	1.0412	1.0007
Feb-19	0.7256	1.0409	1.0005
Mar-19	0.7261	1.0411	1.0015
Apr-19	0.7254	1.0408	1.0011
May-19	0.7253	1.0407	1.0009
Jun-19	0.7271	1.0416	1.0021
Jul-19	0.7271	1.0416	1.0022
Aug-19	0.7271	1.0416	1.0021
Sep-19	0.7284	1.0422	1.0026
Oct-19	0.7302	1.0430	1.0033

PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

GENERIC DRUGS - COST TREND

Incurred Date	MONTHLY DATA				ROLLING 12				EXPONENTIAL FIT	
	Supply	AWP Cost	Cost/ Supply	Monthly Cost Trend	Supply	Adjusted Allowed Charge	Cost/ Supply	Rolling 12 Cost Trend	Monthly Data	Rolling 12 Data
Nov-15	1,409,298	\$5,183,691	\$3.68							
Dec-15	1,591,712	\$5,934,947	\$3.73						\$3.68	\$3.90
Jan-16	1,262,298	\$4,594,783	\$3.64						\$3.68	\$3.90
Feb-16	1,256,328	\$4,635,929	\$3.69						\$3.68	\$3.89
Mar-16	1,373,082	\$5,028,527	\$3.66						\$3.68	\$3.88
Apr-16	1,284,625	\$4,764,149	\$3.71						\$3.68	\$3.88
May-16	1,300,908	\$4,856,287	\$3.73						\$3.68	\$3.87
Jun-16	1,329,245	\$4,936,589	\$3.71						\$3.68	\$3.87
Jul-16	1,281,364	\$4,784,181	\$3.73						\$3.68	\$3.86
Aug-16	1,334,789	\$4,995,914	\$3.74						\$3.68	\$3.85
Sep-16	1,310,879	\$4,896,533	\$3.74						\$3.68	\$3.85
Oct-16	1,338,459	\$5,087,901	\$3.80		16,072,987	\$59,699,430	\$3.71		\$3.68	\$3.84
Nov-16	1,319,442	\$4,986,389	\$3.78	2.7%	15,983,131	\$59,502,128	\$3.72		\$3.68	\$3.84
Dec-16	1,385,091	\$5,281,115	\$3.81	2.3%	15,776,510	\$58,848,297	\$3.73		\$3.68	\$3.83
Jan-17	1,360,948	\$5,022,766	\$3.69	1.4%	15,875,160	\$59,276,280	\$3.73		\$3.68	\$3.83
Feb-17	1,207,752	\$4,570,607	\$3.78	2.6%	15,826,584	\$59,210,958	\$3.74		\$3.68	\$3.82
Mar-17	1,366,361	\$5,093,620	\$3.73	1.8%	15,819,863	\$59,276,052	\$3.75		\$3.68	\$3.81
Apr-17	1,246,700	\$4,675,406	\$3.75	1.1%	15,781,938	\$59,187,310	\$3.75		\$3.68	\$3.81
May-17	1,330,444	\$5,035,245	\$3.78	1.4%	15,811,474	\$59,366,267	\$3.75		\$3.68	\$3.80
Jun-17	1,260,883	\$4,776,244	\$3.79	2.0%	15,743,112	\$59,205,922	\$3.76		\$3.68	\$3.80
Jul-17	1,222,858	\$4,568,241	\$3.74	0.1%	15,684,606	\$58,989,981	\$3.76		\$3.68	\$3.79
Aug-17	1,288,361	\$4,865,383	\$3.78	0.9%	15,638,178	\$58,859,451	\$3.76		\$3.68	\$3.78
Sep-17	1,158,472	\$4,424,365	\$3.82	2.2%	15,485,771	\$58,387,282	\$3.77		\$3.69	\$3.78
Oct-17	1,255,779	\$4,757,527	\$3.79	-0.3%	15,403,091	\$58,056,908	\$3.77		\$3.69	\$3.77
Nov-17	1,225,377	\$4,604,450	\$3.76	-0.6%	15,309,026	\$57,674,969	\$3.77		\$3.69	\$3.77
Dec-17	1,218,854	\$4,687,087	\$3.85	0.9%	15,142,789	\$57,080,941	\$3.77		\$3.69	\$3.76
Jan-18	1,157,515	\$4,245,081	\$3.67	-0.6%	14,939,356	\$56,303,255	\$3.77		\$3.69	\$3.76
Feb-18	1,014,396	\$3,763,326	\$3.71	-2.0%	14,746,000	\$55,495,974	\$3.76		\$3.69	\$3.75
Mar-18	1,106,472	\$4,132,462	\$3.73	0.2%	14,486,111	\$54,534,816	\$3.76		\$3.69	\$3.74
Apr-18	1,056,401	\$3,872,957	\$3.67	-2.2%	14,295,812	\$53,732,367	\$3.76		\$3.69	\$3.74
May-18	1,107,939	\$4,029,696	\$3.64	-3.9%	14,073,307	\$52,726,818	\$3.75		\$3.69	\$3.73
Jun-18	1,023,335	\$3,749,404	\$3.66	-3.3%	13,835,759	\$51,699,978	\$3.74		\$3.69	\$3.73
Jul-18	1,070,647	\$3,891,834	\$3.64	-2.7%	13,683,548	\$51,023,572	\$3.73		\$3.69	\$3.72
Aug-18	1,091,241	\$3,976,164	\$3.64	-3.5%	13,486,428	\$50,134,352	\$3.72		\$3.69	\$3.72
Sep-18	980,218	\$3,558,349	\$3.63	-4.9%	13,308,174	\$49,268,336	\$3.70		\$3.69	\$3.71
Oct-18	1,100,202	\$3,972,050	\$3.61	-4.7%	13,152,597	\$48,482,859	\$3.69		\$3.69	\$3.70
Nov-18	1,055,794	\$3,774,273	\$3.57	-4.9%	12,983,014	\$47,652,682	\$3.67		\$3.69	\$3.70
Dec-18	1,074,026	\$3,908,910	\$3.64	-5.4%	12,838,186	\$46,874,505	\$3.65		\$3.69	\$3.69
Jan-19	1,038,419	\$3,831,537	\$3.69	0.6%	12,719,090	\$46,460,961	\$3.65		\$3.69	\$3.69
Feb-19	927,070	\$3,411,587	\$3.68	-0.8%	12,631,764	\$46,109,222	\$3.65		\$3.69	\$3.68
Mar-19	1,014,495	\$3,744,481	\$3.69	-1.2%	12,539,787	\$45,721,240	\$3.65		\$3.69	\$3.68
Apr-19	1,008,472	\$3,759,893	\$3.73	1.7%	12,491,858	\$45,608,176	\$3.65		\$3.69	\$3.67
May-19	1,001,705	\$3,717,564	\$3.71	2.0%	12,385,624	\$45,296,044	\$3.66		\$3.69	\$3.67
Jun-19	945,839	\$3,518,182	\$3.72	1.5%	12,308,128	\$45,064,822	\$3.66		\$3.69	\$3.66
Jul-19	974,438	\$3,576,397	\$3.67	1.0%	12,211,919	\$44,749,384	\$3.66		\$3.69	\$3.65
Aug-19	930,989	\$3,430,996	\$3.69	1.1%	12,051,667	\$44,204,216	\$3.67		\$3.69	\$3.65
Sep-19	896,811	\$3,388,689	\$3.78	4.1%	11,968,260	\$44,034,557	\$3.68		\$3.69	\$3.64
Oct-19	971,467	\$3,654,616	\$3.76	4.2%	11,839,525	\$43,717,124	\$3.69		\$3.69	\$3.64

Exponential Trend: 0.1% -1.8%



Regressions

24 Months on Monthly	
1.000	3.357
0.000	0.697
0.001	0.017
0.018	22.000

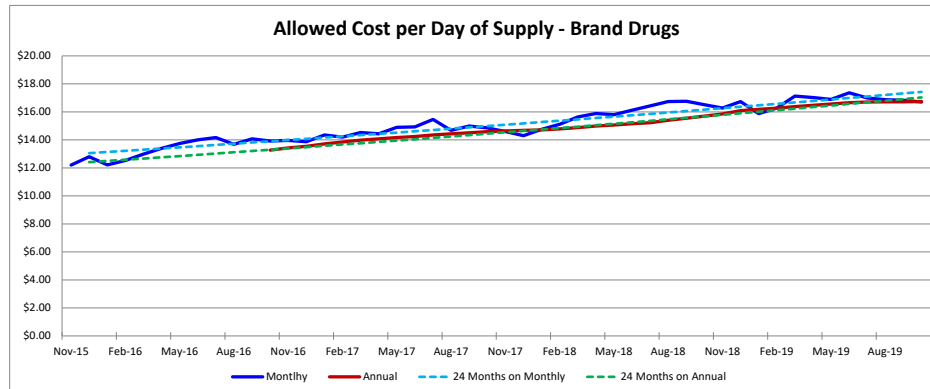
24 Months on Annual	
1.000	32.513
0.000	0.278
0.736	0.007
61.181	22.000

PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

BRAND DRUGS - COST TREND

Incurred Date	MONTHLY DATA				ROLLING 12				EXPONENTIAL FIT	
	Supply	AWP Cost	Cost/ Supply	Monthly Cost Trend	Supply	Adjusted Allowed Charge	Cost/ Supply	Rolling 12 Cost Trend	Monthly Data	Rolling 12 Data
Nov-15	193,387	\$2,359,863	\$12.20							
Dec-15	230,665	\$2,951,543	\$12.80						\$13.05	\$12.41
Jan-16	158,992	\$1,941,403	\$12.21						\$13.14	\$12.50
Feb-16	153,872	\$1,928,780	\$12.53						\$13.22	\$12.59
Mar-16	181,756	\$2,360,185	\$12.99						\$13.30	\$12.67
Apr-16	163,802	\$2,193,980	\$13.39						\$13.38	\$12.76
May-16	159,135	\$2,186,871	\$13.74						\$13.47	\$12.85
Jun-16	155,558	\$2,178,666	\$14.01						\$13.55	\$12.94
Jul-16	149,643	\$2,119,906	\$14.17						\$13.64	\$13.02
Aug-16	160,800	\$2,200,072	\$13.68		1,707,610	\$22,421,270			\$13.73	\$13.12
Sep-16	160,832	\$2,264,218	\$14.08		1,868,442	\$24,685,488			\$13.81	\$13.21
Oct-16	163,355	\$2,273,318	\$13.92		2,031,797	\$26,958,807	\$13.27		\$13.90	\$13.30
Nov-16	161,881	\$2,259,520	\$13.96	14.4%	2,000,291	\$26,858,465	\$13.43		\$13.99	\$13.39
Dec-16	179,104	\$2,483,200	\$13.86	8.4%	1,948,730	\$26,390,121	\$13.54		\$14.08	\$13.48
Jan-17	155,052	\$2,226,005	\$14.36	17.6%	1,944,790	\$26,674,724	\$13.72		\$14.17	\$13.58
Feb-17	139,030	\$1,974,655	\$14.20	13.3%	1,929,948	\$26,720,598	\$13.85		\$14.26	\$13.67
Mar-17	164,438	\$2,388,714	\$14.53	11.9%	1,912,630	\$26,749,127	\$13.99		\$14.34	\$13.76
Apr-17	146,119	\$2,108,734	\$14.43	7.7%	1,894,947	\$26,663,881	\$14.07		\$14.43	\$13.86
May-17	161,626	\$2,408,086	\$14.90	8.4%	1,897,438	\$26,885,095	\$14.17		\$14.52	\$13.95
Jun-17	153,671	\$2,294,212	\$14.93	6.6%	1,895,551	\$27,000,641	\$14.24		\$14.62	\$14.05
Jul-17	152,218	\$2,353,698	\$15.46	9.2%	1,898,126	\$27,234,434	\$14.35		\$14.71	\$14.14
Aug-17	158,257	\$2,322,810	\$14.68	7.3%	1,895,583	\$27,357,172	\$14.43		\$14.80	\$14.24
Sep-17	149,909	\$2,246,461	\$14.99	6.4%	1,884,660	\$27,339,415	\$14.51		\$14.90	\$14.34
Oct-17	171,371	\$2,545,223	\$14.85	6.7%	1,892,676	\$27,611,319	\$14.59	9.9%	\$14.99	\$14.44
Nov-17	168,063	\$2,453,949	\$14.60	4.6%	1,898,858	\$27,805,748	\$14.64	9.1%	\$15.08	\$14.54
Dec-17	178,975	\$2,558,667	\$14.30	3.1%	1,898,729	\$27,881,215	\$14.68	8.4%	\$15.18	\$14.64
Jan-18	145,807	\$2,151,613	\$14.76	2.8%	1,889,484	\$27,806,823	\$14.72	7.3%	\$15.28	\$14.74
Feb-18	132,077	\$1,996,457	\$15.12	6.4%	1,882,531	\$27,828,625	\$14.78	6.8%	\$15.37	\$14.85
Mar-18	149,696	\$2,340,884	\$15.64	7.6%	1,867,789	\$27,780,795	\$14.87	6.4%	\$15.46	\$14.94
Apr-18	146,263	\$2,323,523	\$15.89	10.1%	1,867,933	\$27,995,584	\$14.99	6.5%	\$15.56	\$15.05
May-18	149,357	\$2,359,910	\$15.80	6.0%	1,855,664	\$27,947,407	\$15.06	6.3%	\$15.66	\$15.15
Jun-18	148,045	\$2,386,125	\$16.12	8.0%	1,850,038	\$28,039,320	\$15.16	6.4%	\$15.76	\$15.26
Jul-18	142,956	\$2,349,378	\$16.43	6.3%	1,840,776	\$28,034,999	\$15.23	6.1%	\$15.86	\$15.36
Aug-18	157,222	\$2,631,964	\$16.74	14.1%	1,839,741	\$28,344,152	\$15.41	6.8%	\$15.96	\$15.47
Sep-18	146,843	\$2,460,224	\$16.75	11.8%	1,836,675	\$28,557,916	\$15.55	7.2%	\$16.06	\$15.58
Oct-18	169,677	\$2,801,050	\$16.51	11.2%	1,834,981	\$28,813,743	\$15.70	7.6%	\$16.16	\$15.68
Nov-18	165,903	\$2,700,336	\$16.28	11.5%	1,832,821	\$29,060,130	\$15.86	8.3%	\$16.27	\$15.79
Dec-18	173,010	\$2,895,461	\$16.74	17.1%	1,826,856	\$29,396,924	\$16.09	9.6%	\$16.37	\$15.90
Jan-19	154,103	\$2,445,875	\$15.87	7.6%	1,835,152	\$29,691,186	\$16.18	9.9%	\$16.47	\$16.01
Feb-19	141,370	\$2,300,257	\$16.27	7.6%	1,844,445	\$29,994,986	\$16.26	10.0%	\$16.58	\$16.13
Mar-19	145,897	\$2,498,521	\$17.13	9.5%	1,840,646	\$30,152,624	\$16.38	10.1%	\$16.67	\$16.23
Apr-19	149,585	\$2,546,919	\$17.03	7.2%	1,843,968	\$30,376,020	\$16.47	9.9%	\$16.78	\$16.34
May-19	152,532	\$2,577,280	\$16.90	6.9%	1,847,143	\$30,593,390	\$16.56	10.0%	\$16.89	\$16.45
Jun-19	142,549	\$2,475,173	\$17.36	7.7%	1,841,647	\$30,682,438	\$16.66	9.9%	\$16.99	\$16.57
Jul-19	150,535	\$2,558,589	\$17.00	3.4%	1,849,226	\$30,891,649	\$16.71	9.7%	\$17.10	\$16.68
Aug-19	146,209	\$2,467,491	\$16.88	0.8%	1,838,213	\$30,727,176	\$16.72	8.5%	\$17.21	\$16.80
Sep-19	152,635	\$2,568,925	\$16.83	0.5%	1,844,005	\$30,835,876	\$16.72	7.5%	\$17.32	\$16.92
Oct-19	163,796	\$2,736,614	\$16.71	1.2%	1,838,124	\$30,771,440	\$16.74	6.6%	\$17.43	\$17.03

Exponential Trend: 7.8% 8.6%



Regressions

24 Months on Monthly

1.000	0.002
0.000	1.259
0.697	0.030
50.690	22.000

24 Months on Annual

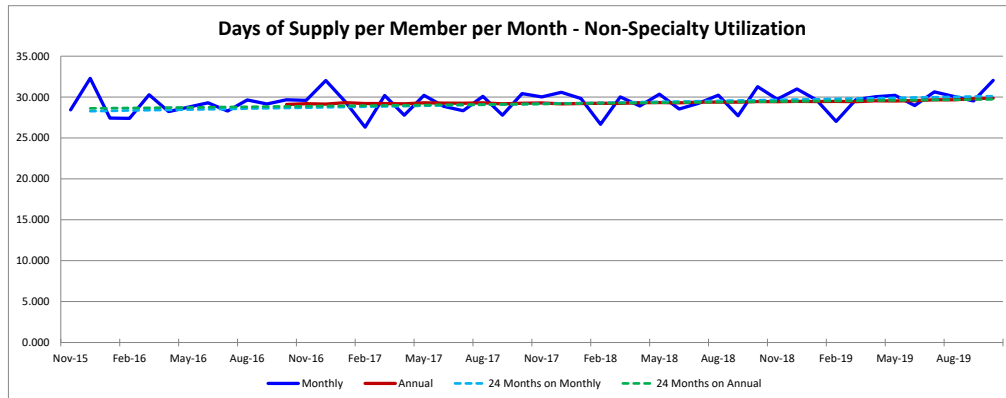
1.000	0.001
0.000	0.325
0.976	0.008
912.288	22.000

PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

NON-SPECIALTY DRUGS - UTILIZATION TREND

Incurred Date	MONTHLY DATA				ROLLING 12				EXPONENTIAL FIT	
	Membership	Supply	Supply per Member	Monthly Utilization Trend	Membership	Supply	Supply per Member	Rolling 12 Utilization Trend	Monthly Data	Rolling 12 Data
Nov-15	57,692	1,640,435	28.434							
Dec-15	57,890	1,869,201	32.289						28.279	28.620
Jan-16	52,944	1,452,347	27.432						28.318	28.644
Feb-16	52,655	1,442,268	27.391						28.357	28.668
Mar-16	52,655	1,594,572	30.283						28.394	28.690
Apr-16	52,628	1,485,341	28.223						28.433	28.714
May-16	52,040	1,496,796	28.762						28.472	28.737
Jun-16	52,000	1,523,092	29.290						28.511	28.762
Jul-16	51,849	1,467,167	28.297						28.549	28.785
Aug-16	51,743	1,534,199	29.650						28.589	28.809
Sep-16	51,752	1,509,054	29.159						28.629	28.833
Oct-16	51,944	1,540,850	29.664		637,792	18,555,322	29.093		28.667	28.856
Nov-16	51,926	1,537,234	29.604	4.1%	632,026	18,452,121	29.195		28.707	28.880
Dec-16	51,220	1,639,971	32.018	-0.8%	625,356	18,222,891	29.140		28.746	28.904
Jan-17	54,466	1,602,157	29.416	7.2%	626,878	18,372,701	29.308		28.786	28.928
Feb-17	54,376	1,431,326	26.323	-3.9%	628,599	18,361,759	29.211		28.826	28.952
Mar-17	54,286	1,639,452	30.200	-0.3%	630,230	18,406,639	29.206		28.862	28.974
Apr-17	54,315	1,509,577	27.793	-1.5%	631,917	18,430,874	29.167		28.902	28.998
May-17	54,511	1,647,314	30.220	5.1%	634,388	18,581,392	29.290		28.941	29.022
Jun-17	54,564	1,575,938	28.882	-1.4%	636,952	18,634,239	29.255		28.981	29.046
Jul-17	54,781	1,551,527	28.322	0.1%	639,884	18,718,599	29.253		29.020	29.069
Aug-17	54,843	1,650,615	30.097	1.5%	642,984	18,835,015	29.293		29.060	29.094
Sep-17	54,384	1,510,575	27.776	-4.7%	645,616	18,836,536	29.176		29.101	29.118
Oct-17	54,362	1,653,491	30.416	2.5%	648,034	18,949,177	29.241	0.5%	29.140	29.141
Nov-17	54,513	1,636,687	30.024	1.4%	650,621	19,048,630	29.278	0.3%	29.180	29.166
Dec-17	54,478	1,666,506	30.590	-4.5%	653,879	19,075,165	29.172	0.1%	29.219	29.189
Jan-18	52,507	1,566,328	29.831	1.4%	651,920	19,039,336	29.205	-0.4%	29.260	29.214
Feb-18	52,433	1,399,107	26.684	1.4%	649,977	19,007,117	29.243	0.1%	29.301	29.238
Mar-18	52,332	1,570,601	30.012	-0.6%	648,023	18,938,266	29.225	0.1%	29.337	29.260
Apr-18	52,560	1,520,012	28.920	4.1%	646,268	18,948,701	29.320	0.5%	29.378	29.285
May-18	52,733	1,600,801	30.357	0.5%	644,490	18,902,188	29.329	0.1%	29.418	29.308
Jun-18	52,720	1,505,017	28.547	-1.2%	642,646	18,831,267	29.303	0.2%	29.458	29.333
Jul-18	53,446	1,562,703	29.239	3.2%	641,311	18,842,443	29.381	0.4%	29.498	29.357
Aug-18	53,468	1,616,437	30.232	0.4%	639,936	18,808,265	29.391	0.3%	29.539	29.381
Sep-18	53,278	1,476,631	27.716	-0.2%	638,830	18,774,321	29.389	0.7%	29.580	29.406
Oct-18	53,566	1,674,986	31.270	2.8%	638,034	18,795,816	29.459	0.7%	29.620	29.429
Nov-18	53,900	1,602,977	29.740	-0.9%	637,421	18,762,106	29.434	0.5%	29.661	29.454
Dec-18	53,803	1,666,853	30.981	1.3%	636,746	18,762,453	29.466	1.0%	29.701	29.478
Jan-19	54,540	1,617,145	29.651	-0.6%	638,779	18,813,270	29.452	0.8%	29.742	29.502
Feb-19	54,495	1,472,715	27.025	1.3%	640,841	18,886,878	29.472	0.8%	29.783	29.527
Mar-19	54,459	1,616,407	29.681	-1.1%	642,968	18,932,684	29.446	0.8%	29.821	29.549
Apr-19	54,100	1,624,808	30.033	3.9%	644,508	19,037,480	29.538	0.7%	29.862	29.574
May-19	53,986	1,630,699	30.206	-0.5%	645,761	19,067,378	29.527	0.7%	29.902	29.598
Jun-19	53,631	1,553,564	28.968	1.5%	646,672	19,115,925	29.560	0.9%	29.944	29.623
Jul-19	52,969	1,622,817	30.637	4.8%	646,195	19,176,039	29.675	1.0%	29.984	29.647
Aug-19	52,672	1,583,669	30.067	-0.5%	645,399	19,143,271	29.661	0.9%	30.026	29.671
Sep-19	52,492	1,549,724	29.523	6.5%	644,613	19,216,364	29.811	1.4%	30.067	29.696
Oct-19	52,336	1,676,800	32.039	2.5%	643,383	19,218,178	29.871	1.4%	30.108	29.720

Exponential Trend: 1.6% 1.0%



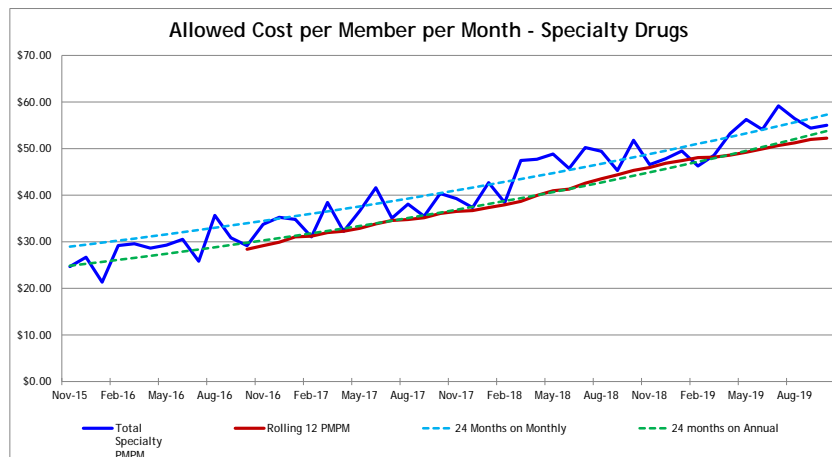
Regressions	24 Months on Monthly		24 Months on Annual	
	1.000	4.248	1.000	9.146
	0.000	1.789	0.000	0.087
	0.051	0.042	0.891	0.002
	1.180	22.000	180.417	22.000

PHARMACY TREND DEVELOPMENT - SPECIALTY TREND CALCULATION

Incurred Date	MONTHLY DATA			ROLLING 12			EXPONENTIAL FIT	
	Members	Contract Adjusted	Total Specialty	Members	Contract Adjusted	Rolling 12	Monthly Data	Rolling 12 Data
		Charges	PMPM		Charges	PMPM		
Nov-15	57,692	\$ 1,423,057	\$24.67				\$28.96	\$24.86
Dec-15	57,890	\$ 1,545,382	\$26.70				\$29.38	\$25.27
Jan-16	52,944	\$ 1,129,447	\$21.33				\$29.81	\$25.69
Feb-16	52,655	\$ 1,538,001	\$29.21				\$30.26	\$26.13
Mar-16	52,655	\$ 1,557,010	\$29.57				\$30.68	\$26.54
Apr-16	52,628	\$ 1,506,423	\$28.62				\$31.14	\$26.98
May-16	52,040	\$ 1,524,654	\$29.30				\$31.59	\$27.43
Jun-16	52,000	\$ 1,587,963	\$30.54				\$32.06	\$27.89
Jul-16	51,849	\$ 1,339,390	\$25.83				\$32.52	\$28.34
Aug-16	51,743	\$ 1,845,901	\$35.67				\$33.00	\$28.82
Sep-16	51,752	\$ 1,596,437	\$30.85				\$33.49	\$29.31
Oct-16	51,944	\$ 1,515,744	\$29.18	637,792	\$ 18,109,410	\$28.39	\$33.98	\$29.78
Nov-16	51,926	\$ 1,751,741	\$33.74	632,026	\$ 18,438,094	\$29.17	\$34.48	\$30.29
Dec-16	51,220	\$ 1,805,763	\$35.26	625,356	\$ 18,698,475	\$29.90	\$34.98	\$30.78
Jan-17	54,466	\$ 1,895,094	\$34.79	626,878	\$ 19,464,121	\$31.05	\$35.50	\$31.30
Feb-17	54,376	\$ 1,689,301	\$31.07	628,599	\$ 19,615,420	\$31.20	\$36.03	\$31.83
Mar-17	54,286	\$ 2,086,737	\$38.44	630,230	\$ 20,145,147	\$31.96	\$36.51	\$32.31
Apr-17	54,315	\$ 1,751,569	\$32.25	631,917	\$ 20,390,293	\$32.27	\$37.06	\$32.86
May-17	54,511	\$ 1,995,508	\$36.61	634,388	\$ 20,861,148	\$32.88	\$37.59	\$33.39
Jun-17	54,564	\$ 2,269,379	\$41.59	636,952	\$ 21,542,563	\$33.82	\$38.15	\$33.96
Jul-17	54,781	\$ 1,921,918	\$35.08	639,884	\$ 22,125,091	\$34.58	\$38.70	\$34.51
Aug-17	54,843	\$ 2,087,950	\$38.07	642,984	\$ 22,367,139	\$34.79	\$39.28	\$35.09
Sep-17	54,384	\$ 1,929,773	\$35.48	645,616	\$ 22,700,475	\$35.16	\$39.86	\$35.68
Oct-17	54,362	\$ 2,194,104	\$40.36	648,034	\$ 23,378,835	\$36.08	\$40.44	\$36.27
Nov-17	54,513	\$ 2,140,552	\$39.27	650,621	\$ 23,767,646	\$36.53	\$41.04	\$36.88
Dec-17	54,478	\$ 2,034,702	\$37.35	653,879	\$ 23,996,585	\$36.70	\$41.63	\$37.48
Jan-18	52,507	\$ 2,241,445	\$42.69	651,920	\$ 24,342,937	\$37.34	\$42.25	\$38.11
Feb-18	52,433	\$ 2,013,417	\$38.40	649,977	\$ 24,667,053	\$37.95	\$42.88	\$38.75
Mar-18	52,332	\$ 2,482,749	\$47.44	648,023	\$ 25,063,065	\$38.68	\$43.46	\$39.34
Apr-18	52,560	\$ 2,507,962	\$47.72	646,268	\$ 25,819,458	\$39.95	\$44.11	\$40.01
May-18	52,733	\$ 2,574,864	\$48.83	644,490	\$ 26,398,814	\$40.96	\$44.74	\$40.66
Jun-18	52,720	\$ 2,410,671	\$45.73	642,646	\$ 26,540,106	\$41.30	\$45.41	\$41.35
Jul-18	53,446	\$ 2,683,764	\$50.21	641,311	\$ 27,301,952	\$42.57	\$46.06	\$42.02
Aug-18	53,468	\$ 2,643,020	\$49.43	639,936	\$ 27,857,022	\$43.53	\$46.75	\$42.73
Sep-18	53,278	\$ 2,413,642	\$45.30	638,830	\$ 28,340,891	\$44.36	\$47.45	\$43.45
Oct-18	53,566	\$ 2,774,897	\$51.80	638,034	\$ 28,921,684	\$45.33	\$48.13	\$44.16
Nov-18	53,900	\$ 2,509,540	\$46.56	637,421	\$ 29,290,672	\$45.95	\$48.85	\$44.90
Dec-18	53,803	\$ 2,573,877	\$47.84	636,746	\$ 29,829,847	\$46.85	\$49.55	\$45.64
Jan-19	54,540	\$ 2,699,520	\$49.50	638,779	\$ 30,287,922	\$47.42	\$50.29	\$46.41
Feb-19	54,495	\$ 2,521,749	\$46.27	640,841	\$ 30,796,254	\$48.06	\$51.04	\$47.19
Mar-19	54,459	\$ 2,645,803	\$48.58	642,968	\$ 30,959,308	\$48.15	\$51.72	\$47.91
Apr-19	54,100	\$ 2,880,408	\$53.24	644,508	\$ 31,331,754	\$48.61	\$52.49	\$48.72
May-19	53,986	\$ 3,036,501	\$56.25	645,761	\$ 31,793,391	\$49.23	\$53.25	\$49.51
Jun-19	53,631	\$ 2,900,913	\$54.09	646,672	\$ 32,283,633	\$49.92	\$54.04	\$50.35
Jul-19	52,969	\$ 3,134,275	\$59.17	646,195	\$ 32,734,144	\$50.66	\$54.82	\$51.17
Aug-19	52,672	\$ 2,974,058	\$56.46	645,399	\$ 33,065,181	\$51.23	\$55.64	\$52.03
Sep-19	52,492	\$ 2,854,873	\$54.39	644,613	\$ 33,506,412	\$51.98	\$56.47	\$52.91
Oct-19	52,336	\$ 2,878,380	\$55.00	643,383	\$ 33,609,895	\$52.24	\$57.28	\$53.77

Exponential Trend:

19.0% 21.8%



24 Months on Monthly	
1.000	0.000
0.000	2.770
0.717	0.066
55.807	22.000

24 Months on Rolling 12	
1.001	0.000
0.000	0.751
0.978	0.018
971.799	22.000

PHARMACY TREND DEVELOPMENT
SUMMARY

EXHIBIT REDACTED

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
BENEFIT PLAN RELATIVE VALUE FACTORS

EXHIBIT 3A

Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

Index	Product	In-Network Benefits							Out-of-Network Benefits			Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	Active
1	VFP	\$200	20%	\$800	\$20	\$20			\$400	30%	\$1,600	1.0353
2	VFP	\$300	10%	\$1,300	\$10	\$30	\$100	\$50	\$600	30%	\$2,600	1.0202
3	VFP	\$500	20%	\$1,500	\$20	\$20			\$1,000	30%	\$3,000	0.9730
4	VFP	\$500	20%	\$1,500	\$20	\$40	\$250	\$250	\$1,000	30%	\$3,000	0.9745
5	VFP	\$500	20%	\$1,750	\$20	\$20			\$1,000	30%	\$3,500	0.9623
6	VFP	\$1,000	20%	\$2,300	\$20	\$20	\$100		\$2,000	30%	\$4,600	0.9278
7	VFP	\$1,000	0%	\$2,350	\$25	\$25	\$50	\$50	\$2,000	30%	\$3,500	0.9775
8	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	0.8708
9	VFP	\$1,000	0%	\$2,000	\$30	\$50	\$150		\$2,000	30%	\$4,000	0.9559
10	VFP	\$1,500	20%	\$3,000	\$25	\$45	\$250	\$250	\$3,000	30%	\$6,000	0.8789
11	VFP	\$2,000	30%	\$3,500	\$20	\$20	\$500		\$3,000	50%	\$6,000	0.8459
12	VFP	\$2,000	20%	\$4,000	\$40	\$40	\$150		\$4,000	30%	\$8,000	0.8340
13	VFP	\$2,500	20%	\$5,000	\$20	\$20			\$5,000	30%	\$10,000	0.7989
14	VFP	\$2,500	20%	\$5,150	\$20	\$40			\$5,000	30%	\$10,300	0.7808
15	VFP	\$2,500	20%	\$6,000	\$20	\$30			\$5,000	30%	\$12,000	0.7717
16	VFP	\$3,000	0%	\$3,000	\$30	\$40	\$200		\$6,000	30%	\$6,000	0.8613
17	VFP	\$3,000	0%	\$4,000	\$30	\$50	\$150		\$6,000	30%	\$8,000	0.8387
18	VFP	\$4,000	0%	\$5,000	\$30	\$50	\$150		\$8,000	30%	\$10,000	0.7997
19	VFP	\$4,000	20%	\$6,000	\$40	\$40	\$150		\$8,000	30%	\$12,000	0.7562
20	VFP	\$5,000	0%	\$5,000	\$25	\$25			\$10,000	30%	\$10,000	0.7504
21	COMP	\$2,000	10%	\$3,000								0.8323
22	COMP	\$3,000	0%	\$3,000								0.8034
23	COMP	\$5,000	0%	\$5,000								0.7098
24	COMP	\$6,550	0%	\$6,550								0.6592
25	COMP	\$6,850	0%	\$6,850								0.6508
26	COMP	\$7,350	0%	\$7,350								0.6376

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.

Vermont Health Partnership (VHP) Medical Plans

index	Product	VHP In-Network Benefits							VHP Out-of-Network Benefits			Relativity Factor
		IP	OP	PCP	SCP	ER	AMB	OOPM	Deductible	Coinsurance	Out-of-Pocket	Active
1	VHP ¹	\$0	\$0	\$10	\$20	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0592
2	VHP ¹	\$250	\$100	\$15	\$25	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0467
3	VHP ¹	\$250	\$125	\$20	\$40	\$150	\$0	\$8,150	\$500	30%	\$14,700	1.0262
4	VHP ¹	\$250	\$250	\$20	\$20	\$200	\$100	\$8,150	\$1,000	30%	\$14,700	1.0337
5	VHP ¹	\$500	\$250	\$20	\$30	\$100	\$0	\$8,150	\$500	30%	\$14,700	1.0305
6	VHP ¹	\$750	\$750	\$20	\$30	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0183

PCP	Primary Care Physician Copay
SCP	Specialist Physician Copay
IP	Inpatient Care Deductible (max of 3/yr per family)
OP	Outpatient Surgery Copay
ER	Emergency Room Copay
AMB	Ambulance Copay
OOPM	Per ACA, all copays accumulate toward the Out of Pocket Maximum

1. All VHP Plans have a DME rider benefit of: \$100 deductible, 20% coinsurance, built into the relativity.
2. ER Copay: the displayed member copay goes toward the facility allowed charges.
Associated physician and ancillary charges are the covered at 100%.

BCBSVT Indemnity Consumer Driven Health Plans (CDHPs)

Index	Product	In-Network							Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Active
1	CDHP	\$1,500	0%	\$1,500	\$1,400	N/A	N/A	SAAO	1.1275
2	CDHP	\$1,500	20%	\$2,500	\$1,400	N/A	N/A	SAAO	1.0618
3	CDHP	\$2,000	0%	\$2,000	\$1,400	N/A	N/A	SAAO	1.0773
4	CDHP	\$2,000	20%	\$4,000	\$1,400	N/A	N/A	SAAO	0.9916
5	CDHP	\$2,500	0%	\$2,500	\$1,400	0%	N/A	SAAO	1.0443
6	CDHP	\$2,500	0%	\$2,500	\$1,400	N/A	N/A	SAAO	1.0357
7	CDHP	\$2,500	0%	\$3,500	\$1,400	0%	\$10/\$30/\$50	SAAO	1.0380
8	CDHP	\$2,500	10%	\$3,500	\$1,400	0%	N/A	SAAO	1.0061
9	CDHP	\$2,500	20%	\$3,500	\$1,400	N/A	N/A	SAAO	0.9863
10	CDHP	\$2,500	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9600
11	CDHP	\$2,600	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9562
12	CDHP	\$2,700	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9525
13	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	\$10/\$35/\$50	SAAO	1.0004
14	CDHP	\$3,000	0%	\$3,000	\$1,400	0%	N/A	SAAO	1.0099
15	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	N/A	SAAO	1.0004
16	CDHP	\$3,000	20%	\$5,000	\$1,400	0%	N/A	SAAO	0.9425
17	CDHP	\$3,500	0%	\$3,500	\$1,400	0%	N/A	SAAO	0.9801
18	CDHP	\$4,000	0%	\$4,000	\$1,400	0%	N/A	SAAO	0.9539
19	CDHP	\$4,000	20%	\$6,650	\$1,400	0%	N/A	SAAO	0.8872
20	CDHP	\$5,000	0%	\$5,000	\$1,400	0%	N/A	SAAO	0.9094
21	CDHP	\$5,000	0%	\$5,000	\$1,400	N/A	N/A	SAAO	0.8979
22	CDHP	\$6,000	0%	\$6,000	\$1,400	0%	N/A	SAAO	0.8731
23	CDHP	\$6,350	0%	\$6,350	\$1,400	0%	N/A	SAAO	0.8619
24	CDHP	\$6,450	0%	\$6,450	\$1,400	N/A	N/A	SAAO	0.8463
25	CDHP	\$6,550	0%	\$6,550	\$1,400	0%	N/A	SAAO	0.8557
26	CDHP	\$6,550	0%	\$6,550	\$1,400	N/A	N/A	SAAO	0.8432
27	CDHP	\$6,650	0%	\$6,650	\$1,400	0%	N/A	SAAO	0.8527
28	CDHP	\$6,650	0%	\$6,650	\$1,400	N/A	N/A	SAAO	0.8402
29	CDHP	\$6,850	0%	\$6,850	\$1,400	0%	N/A	SAAO	0.8468
30	CDHP	\$7,350	0%	\$7,350	\$1,400	0%	N/A	SAAO	0.8328

1. **Wellness Rx:** if applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for **Wellness Rx** accumulates toward the Out-of-Pocket Maximum.
2. **All other drugs** are subject to deductible. Once the deductible is met, drugs are subject to the **Drugs After Deductible** cost share until the Out-of-Pocket Maximum is met.
3. The **Rx OOPM Limit** is as described in Vermont Act 171.

Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Relativity
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			Active
1	CM1	\$100	\$5	40%	60%	\$10	40%	60%	\$1,400	SAAO	0.1806
2	CM2	\$0	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	0.2189
3	CM2	\$100	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	0.2097
4	COI	\$1	30%	30%	40%	30%	30%	40%	\$1,400	SAAO	0.1851
5	COI	\$1	50%	50%	50%	50%	50%	50%	\$1,400	SAAO	0.1736
6	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	0.2870
7	COP	\$0	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	0.2299
8	COP	\$0	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	0.2225
9	COP	\$0	\$10	\$30	\$60	\$20	\$60	\$120	\$1,400	SAAO	0.2221
10	COP	\$0	\$10	\$35	\$60	\$20	\$70	\$120	\$1,400	SAAO	0.2168
11	COP	\$0	\$15	\$25	\$40	\$30	\$50	\$80	\$1,400	SAAO	0.2814
12	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.2248
13	COP	\$0	\$15	\$35	\$50	\$30	\$70	\$100	\$1,400	SAAO	0.2173
14	COP	\$0	\$20	\$40	\$60	\$40	\$80	\$120	\$1,400	SAAO	0.2132
15	COP	\$0	\$20	\$40	\$80	\$40	\$80	\$160	\$1,400	SAAO	0.2126
16	COP	\$0	\$25	\$50	\$75	\$50	\$100	\$150	\$1,400	SAAO	0.2047
17	COP	\$0	\$5	\$15	\$30	\$10	\$30	\$60	\$1,400	SAAO	0.2963
18	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	0.2251
19	COP	\$50	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	0.2257
20	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	0.2928
21	COP	\$100	\$10	\$15	\$30	\$20	\$30	\$60	\$1,400	SAAO	0.2809
22	COP	\$100	\$10	\$25	\$45	\$20	\$50	\$90	\$1,400	SAAO	0.2222
23	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	0.2149
24	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	100%	0.2185
25	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	0.2147
26	COP	\$100	\$10	\$40	\$60	\$20	\$80	\$120	\$1,400	SAAO	0.2084
27	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.2180
28	COP	\$100	\$15	\$40	\$60	\$30	\$80	\$120	\$1,400	SAAO	0.2053
29	COP	\$100	\$5	\$20	\$40	\$10	\$40	\$80	\$1,400	SAAO	0.2284
30	COP	\$150	\$20	\$80	\$100	\$40	\$160	\$200	\$1,400	SAAO	0.1956

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COI/COI); CM2 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

Medicare Secondary Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	
1	JPLAN	\$100	20%	\$500	\$10	\$10						0.3771
2	JPLAN	\$100	20%	\$500	\$20	\$20						0.3679
3	VFP	\$0	0%	\$0	\$20	\$20	\$50		\$250	20%	\$1,000	0.3947
4	VFP	\$100	20%	\$500	\$10	\$10			\$200	30%	\$1,000	0.3391
5	VFP	\$1,000	0%	\$2,350	\$25	\$25	\$50	\$50	\$2,000	30%	\$3,500	0.2597
6	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	0.2238
7	VFP	\$500	20%	\$1,600	\$10	\$10			\$1,000	30%	\$3,000	0.2781

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.
2. The J Plan deductible applies only to infusion therapy, DME and prosthetics ambulance.

Medicare Secondary Consumer Driven Health Plans (CDHPs)

Index	Product	In-Network							Relativity Factor
		Deductible	Coinsurance	Out-of-Pocket	RX OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Medicare Secondary
1	CDHP	\$2,500	0%	\$2,500	\$1,400	0%	N/A	SAAO	0.8573
2	CDHP	\$3,500	0%	\$3,500	\$1,400	0%	N/A	SAAO	0.8137
3	CDHP	\$5,000	0%	\$5,000	\$1,400	N/A	\$5/\$20/\$40	SAAO	0.6940

1. Wellness Rx: If applicable, cost sharing rules apply *before* the deductible is satisfied.
The member's cost share for Wellness Rx accumulates toward the Out-of-Pocket Maximum.
2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the Drugs After Deductible cost share until the Out-of-Pocket Maximum is met.
3. The Rx OOPM Limit is as described in Vermont Act 171.

Medicare Secondary Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Relativity
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			Medicare Secondary
1	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	0.9588
2	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.7143
3	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	0.7403
4	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	1.0058
5	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	0.6978
6	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	0.6994

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;
If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

Vermont Freedom Plan (VFP), Comprehensive (COMP), and Indemnity J-Plan (JPLAN)

index	Product	In-Network Benefits							Out-of-Network Benefits			
		Deductible	Coinsurance	Out-of-Pocket	Office Copay	Specialist Copay	ER ¹ Copay	AMB Copay	Deductible	Coinsurance	Out-of-Pocket	Leverage Factor
1	VFP	\$200	20%	\$800	\$20	\$20			\$400	30%	\$1,600	1.0026
2	VFP	\$300	10%	\$1,300	\$10	\$30	\$100	\$50	\$600	30%	\$2,600	1.0029
3	VFP	\$500	20%	\$1,500	\$20	\$20			\$1,000	30%	\$3,000	1.0039
4	VFP	\$1,000	20%	\$3,500	\$25	\$40			\$2,000	30%	\$7,000	1.0063
5	VFP	\$1,000	0%	\$2,000	\$30	\$50	\$150		\$2,000	30%	\$4,000	1.0043
6	VFP	\$1,500	20%	\$3,000	\$25	\$45	\$250	\$250	\$3,000	30%	\$6,000	1.0061
7	VFP	\$2,000	30%	\$3,500	\$20	\$20	\$500		\$3,000	50%	\$6,000	1.0069
8	VFP	\$3,000	0%	\$4,000	\$30	\$50	\$150		\$6,000	30%	\$8,000	1.0070
9	VFP	\$4,000	0%	\$5,000	\$30	\$50	\$150		\$8,000	30%	\$10,000	1.0080
10	VFP	\$5,000	0%	\$5,000	\$25	\$25			\$10,000	30%	\$10,000	1.0094
11	COMP	\$2,000	10%	\$3,000								1.0074
13	COMP	\$5,000	0%	\$5,000								1.0107

1. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are the covered at 100%.

Vermont Health Partnership (VHP) Medical Plans

index	Product	VHP In-Network Benefits							VHP Out-of-Network Benefits			
		Inpatient Care Deductible ²	Outpatient Surgery Copay	Office Copay	Specialist Copay	ER ² Copay	AMB Copay	Out-of-Pocket	Deductible	Coinsurance	Out-of-Pocket	Leverage Factor
1	VHP ¹	\$0	\$0	\$10	\$20	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0011
2	VHP ¹	\$250	\$100	\$15	\$25	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0014
3	VHP ¹	\$250	\$250	\$20	\$20	\$200	\$100	\$8,150	\$1,000	30%	\$14,700	1.0016
4	VHP ¹	\$750	\$750	\$20	\$30	\$50	\$50	\$8,150	\$500	30%	\$14,700	1.0020

1. All VHP Plans have a DME rider benefit of: \$100 deductible, 20% coinsurance, built into the relativity.

2. Maximum of 3/yr per family

3. ER Copay: the displayed member copay goes toward the facility allowed charges. Associated physician and ancillary charges are then covered at 100%.

BCBSVT Comprehensive Consumer Driven Health Plans (CDHPs)

index	Product	In-Network							Leverage Factor	
		Deductible	Coinsurance	Out-of-Pocket	Rx OOPM Limit ³	Wellness Rx ¹	Drugs After Deductible ²	Diabetic Supplies	Medical	Rx
1	CDHP	\$1,500	0%	\$1,500	\$1,400	N/A	N/A	SAAO	1.0049	1.0068
2	CDHP	\$2,500	20%	\$5,000	\$1,400	0%	N/A	SAAO	1.0091	1.0057
3	CDHP	\$3,000	0%	\$3,000	\$1,400	N/A	N/A	SAAO	1.0077	1.0086
4	CDHP	\$5,000	0%	\$5,000	\$1,400	0%	N/A	SAAO	1.0105	1.0059
5	CDHP	\$6,000	0%	\$6,000	\$1,400	0%	N/A	SAAO	1.0116	1.0061
6	CDHP	\$6,850	0%	\$6,850	\$1,400	0%	N/A	SAAO	1.0124	1.0062

1. Wellness Rx: if applicable, cost sharing rules apply *before* the deductible is satisfied.

The member's cost share for Wellness Rx accumulates toward the Out-of-Pocket Maximum.

2. All other drugs are subject to deductible. Once the deductible is met, drugs are subject to the Drugs After Deductible cost share until the Out-of-Pocket Maximum is met.

3. The Rx OOPM Limit is as described in Vermont Act 171.

Prescription Drug Cards

Index	Type	Deductible	Copay (\$) / Coinsurance (%)						OOPM	Diabetic Supplies	Leverage Factor
			Retail Generic	Retail Preferred Brand	Retail Non-Preferred Brand	Mail Order Generic	Mail Order Preferred Brand	Mail Order Non-Preferred Brand			
1	CM1	\$100	\$5	40%	60%	\$10	40%	60%	\$1,400	SAAO	1.0082
2	CM2	\$0	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	1.0055
3	CM2	\$100	\$5	\$50	50%	\$10	\$100	50%	\$1,400	SAAO	1.0068
4	COI	\$1	30%	30%	40%	30%	40%	40%	\$1,400	SAAO	1.0074
5	COI	\$1	50%	50%	50%	50%	50%	50%	\$1,400	SAAO	1.0094
6	COP	\$0	\$10	\$20	\$40	\$20	\$40	\$80	\$1,400	SAAO	1.0045
7	COP	\$0	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	1.0053
8	COP	\$0	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	1.0055
9	COP	\$0	\$10	\$30	\$60	\$20	\$60	\$120	\$1,400	SAAO	1.0056
10	COP	\$0	\$10	\$35	\$60	\$20	\$70	\$120	\$1,400	SAAO	1.0058
11	COP	\$0	\$15	\$25	\$40	\$30	\$50	\$80	\$1,400	SAAO	1.0052
12	COP	\$0	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	1.0060
13	COP	\$0	\$15	\$35	\$50	\$30	\$70	\$100	\$1,400	SAAO	1.0063
14	COP	\$0	\$20	\$40	\$60	\$40	\$80	\$120	\$1,400	SAAO	1.0069
15	COP	\$0	\$20	\$40	\$80	\$40	\$80	\$160	\$1,400	SAAO	1.0070
16	COP	\$0	\$25	\$50	\$75	\$50	\$100	\$150	\$1,400	SAAO	1.0076
17	COP	\$0	\$5	\$15	\$30	\$10	\$30	\$60	\$1,400	SAAO	1.0035
18	COP	\$0	\$5	\$30	\$50	\$10	\$60	\$100	\$1,400	SAAO	1.0046
19	COP	\$50	\$10	\$25	\$50	\$20	\$50	\$100	\$1,400	SAAO	1.0059
20	COP	\$50	\$5	\$10	\$25	\$10	\$20	\$50	\$1,400	SAAO	1.0039
21	COP	\$100	\$10	\$15	\$30	\$20	\$30	\$60	\$1,400	SAAO	1.0052
22	COP	\$100	\$10	\$25	\$45	\$20	\$50	\$90	\$1,400	SAAO	1.0064
23	COP	\$100	\$10	\$30	\$45	\$20	\$60	\$90	\$1,400	SAAO	1.0066
24	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	100%	1.0061
25	COP	\$100	\$10	\$30	\$50	\$20	\$60	\$100	\$1,400	SAAO	1.0067
26	COP	\$100	\$10	\$40	\$60	\$20	\$80	\$120	\$1,400	SAAO	1.0070
27	COP	\$100	\$15	\$30	\$45	\$30	\$60	\$90	\$1,400	SAAO	1.0070
28	COP	\$100	\$15	\$40	\$60	\$30	\$80	\$120	\$1,400	SAAO	1.0075
29	COP	\$100	\$5	\$20	\$40	\$10	\$40	\$80	\$1,400	SAAO	1.0055
30	COP	\$150	\$20	\$80	\$100	\$40	\$160	\$200	\$1,400	SAAO	1.0090

* Type: COI = coinsurance; COP = copay; CM1 = combined (COP/COI/COI); CM2 = combined (COP/COP/COI)

* Diabetic: If "100%" then Diabetic medications and supplies are covered at 100% of allowed charges;

If "SAAO" then Diabetic medications and supplies are subject to cost sharing same as any other prescription drug.

EXHIBIT REDACTED

Tier Factors for Benefits with Separate Medical and Pharmacy Deductibles

Out-of-Pocket Range Type		2-Tier		3-Tier			4-Tier			
		Single	Family	Single	2-Person	Family	Single	Subscriber & Spouse	Subscriber & Children	Family
NA/Stacked	2x Family	1.000	2.376	1.000	2.000	2.822	1.000	2.000	1.746	2.911
NA/Stacked	2.5x Family	1.000	2.370	1.000	2.000	2.811	1.000	2.000	1.744	2.900
NA/Stacked	3x Family	1.000	2.369	1.000	2.000	2.808	1.000	2.000	1.744	2.896
\$0 - \$3,499	Hybrid	1.000	2.292	1.000	1.817	2.742	1.000	1.909	1.673	2.831
\$3,500 - \$4,999	Hybrid	1.000	2.203	1.000	1.747	2.636	1.000	1.837	1.595	2.724
\$5,000 - \$7,350	Hybrid	1.000	2.211	1.000	1.761	2.637	1.000	1.853	1.595	2.726

Tier Factors for Benefits with Integrated Medical and Pharmacy Deductibles

Out-of-Pocket Range Type		2-Tier		3-Tier			4-Tier			
		Single	Family	Single	2-Person	Family	Single	Subscriber & Spouse	Subscriber & Children	Family
NA/Stacked	2x Family	1.000	2.376	1.000	2.000	2.822	1.000	2.000	1.746	2.911
NA/Stacked	2.5x Family	1.000	2.370	1.000	2.000	2.811	1.000	2.000	1.744	2.900
NA/Stacked	3x Family	1.000	2.369	1.000	2.000	2.808	1.000	2.000	1.744	2.896
\$0 - \$3,499	Aggregate	1.000	2.269	1.000	1.776	2.737	1.000	1.872	1.617	2.831
\$3,500 - \$4,999	Aggregate	1.000	2.189	1.000	1.715	2.639	1.000	1.810	1.549	2.732
\$5,000 - \$7,350	Aggregate	1.000	2.118	1.000	1.662	2.551	1.000	1.754	1.496	2.642
\$0 - \$3,499	Hybrid	1.000	2.269	1.000	1.776	2.737	1.000	1.872	1.617	2.831
\$3,500 - \$4,999	Hybrid	1.000	2.195	1.000	1.722	2.643	1.000	1.817	1.555	2.735
\$5,000 - \$7,350	Hybrid	1.000	2.217	1.000	1.772	2.639	1.000	1.868	1.584	2.730

Example of Manual Rate Adjustment

Manual Rate	\$632.81
Average Age/Gender Factor	1.000
Average Industry Factor	1.000
Projection Period	1/1/2021
Trend Factor	7.50%

Group Information	Active	Medicare Primary
Age/Gender Factor	0.940	1.030
Industry Factor	0.965	1.000
Projection Period	1/1/2021	

Contract Conversion	Contract Distribution	Members	Tier Factor	"Contract Tiers"
Single	25	25	1	25
Two-Person	25	50	2.000	50
Family	50	197	2.822	141.09
	100	272		216.09

		Active	Medicare Primary
Manual Rate	A	\$632.81	\$426.98
Adjustment for Age/Gender	B = 0.94 / 1	0.9400	1.0300
Adjustment for Industry	C = 0.965 / 1	0.9650	1.0000
Adjustment for Trend	D	1.0000	1.0000
Pharmacy Contract Adjustment	E =	1.0000	0.0000
Contract Conversion Factor	F = 216.09 / 272	1.2587	1.0000
Adjusted Manual Rate	G = A x B x C x D x E x F	\$722.55	\$0.00

Industry Factors

2-Digit SIC Code	Industry Description	Normalized Factor
01	Agricultural Production - Crops	0.9594
02	Agricultural Production - Livestock And Animal Specialties	0.9664
07	Agricultural Services	0.9598
08	Forestry	0.9652
09	Fishing, Hunting And Trapping	1.0431
10	Metal Mining	1.0988
12	Coal Mining	1.1066
13	Oil And Gas Extraction	1.0115
14	Mining And Quarrying Of Nonmetallic Minerals, Except Fuels	1.0756
15	Building Cnstrctn - General Contractors & Operative Builders	0.9790
16	Heavy Cnstrctn, Except Building Construction - Contractors	0.9732
17	Construction - Special Trade Contractors	0.9743
20	Food And Kindred Products	0.9279
21	Tobacco Products	0.9917
22	Textile Mill Products	0.9441
23	Apparel, Finished Prdcts From Fabrics & Similar Materials	0.9564
24	Lumber And Wood Products, Except Furniture	0.9898
25	Furniture And Fixtures	0.9441
26	Paper And Allied Products	0.9540
27	Printing, Publishing And Allied Industries	0.9349
28	Chemicals And Allied Products	0.9829
29	Petroleum Refining And Related Industries	0.9837
30	Rubber And Miscellaneous Plastic Products	0.9401
31	Leather And Leather Products	0.9698
32	Stone, Clay, Glass, And Concrete Products	0.9770
33	Primary Metal Industries	0.9625
34	Fabricated Metal Prdcts, Except Machinery & Transport Eqpmnt	0.9430
35	Industrial And Commercial Machinery And Computer Equipment	0.9401
36	Electronic, Elctrcl Eqpmnt & Cmpnts, Excpt Computer Eqpmnt	0.9257
37	Transportation Equipment	0.9720
38	Mesr/Anlyz/Cntrl Instrmnts; Photo/Med/Opt Gds; Watches/Clocks	0.9242
39	Miscellaneous Manufacturing Industries	0.9384
40	Railroad Transportation	0.9837
41	Local, Suburban Transit & Interurbn Hgwy Passenger Transport	1.0250
42	Motor Freight Transportation	1.0257
43	United States Postal Service	0.9520
44	Water Transportation	1.0036
45	Transportation By Air	0.9500
46	Pipelines, Except Natural Gas	0.9679
47	Transportation Services	0.9322
48	Communications	0.9078
49	Electric, Gas And Sanitary Services	0.9758
50	Wholesale Trade - Durable Goods	0.9545
51	Wholesale Trade - Nondurable Goods	0.9444
52	Building Matrials, Hrdwr, Garden Supply & Mobile Home Dealsr	0.9433
53	General Merchandise Stores	0.9428
54	Food Stores	0.9452
55	Automotive Dealers And Gasoline Service Stations	1.0175
56	Apparel And Accessory Stores	0.9441
57	Home Furniture, Furnishings And Equipment Stores	0.9361
58	Eating And Drinking Places	1.0690
59	Miscellaneous Retail	0.9748
60	Depository Institutions	0.9282
61	Nondepository Credit Institutions	0.8983
62	Security & Commodity Brokers, Dealers, Exchanges & Services	0.9286
63	Insurance Carriers	0.9520
64	Insurance Agents, Brokers And Service	0.9520
65	Real Estate	0.9758

Industry Factors

2-Digit SIC Code	Industry Description	Normalized Factor
67	Holding And Other Investment Offices	0.9282
70	Hotels, Rooming Houses, Camps, And Other Lodging Places	1.0179
72	Personal Services	0.9981
73	Business Services	0.9416
75	Automotive Repair, Services And Parking	0.9897
76	Miscellaneous Repair Services	0.9547
78	Motion Pictures	0.9673
79	Amusement And Recreation Services	1.0391
80	Health Services	1.0948
81	Legal Services	0.9877
82	Educational Services	0.9451
83	Social Services	1.0948
84	Museums, Art Galleries And Botanical And Zoological Gardens	0.9520
86	Membership Organizations	1.0002
87	Engineering, Accounting, Research, Management & Related Svcs	0.9036
88	Private Households	0.9520
89	Services, Not Elsewhere Classified	0.9560
91	Executive, Legislative & General Government, Except Finance	1.0948
92	Justice, Public Order And Safety	1.0948
93	Public Finance, Taxation And Monetary Policy	1.0091
94	Administration Of Human Resource Programs	1.0155
95	Administration Of Environmental Quality And Housing Programs	1.0075
96	Administration Of Economic Programs	1.0091
97	National Security And International Affairs	1.0401
99	Nonclassifiable Establishments	0.9520

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
ADMINISTRATIVE CHARGES DEVELOPMENT

EXHIBIT 5A

Reconciliation of Experience Base Administrative Expense to Restated GAAP Expenses

(Dollars in 000's)

Business Segment	1/19 - 11/19 Experience Base	Reconciliation to GAAP ⁽¹⁾		
		Commissions	Reclassification Items ⁽²⁾	Reported Expenses
Large Group				
BCBSVT Insured	\$5,578	\$1,169	(\$399)	\$7,146
TVHP Insured	\$1,708	\$333	(\$56)	\$2,097
<i>Insured Large Group Subtotal</i>	<i>\$7,286</i>	<i>\$1,502</i>	<i>(\$455)</i>	<i>\$9,243</i>
BCBSVT Cost Plus ⁽³⁾ and ASO	\$26,466	\$642	(\$809)	\$27,917
Individual/Other				
BCBSVT Small Group (QHP and Non-QHP)	\$13,735	\$859	(\$1,014)	\$15,608
BCBSVT Individual (QHP and Non-QHP)	\$11,594	\$459	(\$790)	\$12,843
TVHP Small Group	(\$0)	\$0	(\$0)	\$0
Medicare Supplement	\$1,370	\$3	(\$46)	\$1,418
TVHP Medigap Blue	\$3,192	\$6	(\$104)	\$3,302
Other Member Categories				
FEP	\$3,993	\$0	(\$62)	\$4,055
Blue MedicareRx	\$1,057	\$0	(\$10)	\$1,067
Other Categories				
CBA	\$8,914	\$33	(\$43)	\$8,990
Host	\$1,918	\$0	(\$169)	\$2,087
HWP	\$266	\$0	\$0	\$266
Total	\$79,791	\$3,503	(\$3,502)	\$86,796

Notes:

(1) Sources: Commissions and Reclassification Items are from Internal BCBSVT reports. Reported Expenses are from Underwriting Results GAAP Basis, restated for the new allocation, for the Experience Base period.

(2) Reclassification Items include the removal of federal fees, GNCB billback, and fees paid to our vendor Health Equity for the administration of Health Savings Accounts and Health Reimbursement Accounts linked to our insurance products.

(3) Allocation of expenses for Cost Plus members with Med Supp coverage based on cost PMPM for insured Med Supp members. In GAAP financials, expenses are included in Large Group Cost Plus.

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING
ADMINISTRATIVE CHARGES DEVELOPMENT

EXHIBIT 5B

Administrative Charges PUPM

Unit		Account	Member	Contract	Invoice Counts	Medical Claim	Projected Claims	Large Group Subtotal	CP Medsup
Administrative Expenses	A	\$898,769	\$2,500,664	\$390,626	\$4,802	\$670,458	\$2,820,581	\$7,285,899	
Unit Months	B	721	153,676	81,861	1,108	144,172	77,209,066		
Expense PUPM	$C = A / B$	\$1,246.56	\$16.27	\$4.77	\$4.33	\$4.65			\$38.94
Increase for Membership	D	3.0%	3.0%	3.0%	3.0%	3.0%			3.0%
Updated Expense PUPM	$E = (1+D) \times C$	\$1,283.70	\$16.76	\$4.91	\$4.46	\$4.79	3.7%		\$40.10
Annual Trend	F	2.2%	2.2%	2.2%	2.2%	2.2%			2.2%
Monthly Trend Factor	$G = (1+F)^{(1/12)}$	1.0018	1.0018	1.0018	1.0018	1.0018			1.0018
Months of Trend to First Effective Period	H	25	25	25	25	25			25
Projection Periods									
Effective Date		Account	Member	Contract	Invoice Counts	Medical Claim	Projected Claims		
Jan-21	$I = E \times G^H$	\$1,343.70	\$17.54	\$5.14	\$4.67	\$5.01	3.7%		\$41.97

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

EXHIBIT 6A

MEMBER MONTHS FOR FULL CREDIBILITY BY POOLING POINT

Pooling Limit	Member Months
\$30,000	8,325
\$35,000	9,182
\$40,000	9,990
\$45,000	10,747
\$50,000	11,462
\$55,000	12,142
\$60,000	12,786
\$65,000	13,406
\$70,000	14,002
\$75,000	14,573
\$80,000	15,117
\$85,000	15,633
\$90,000	16,127
\$95,000	16,600
\$100,000	17,055
\$105,000	17,497
\$110,000	17,923
\$115,000	18,338
\$120,000	18,745
\$125,000	19,140
\$130,000	19,523
\$135,000	19,897
\$140,000	20,266
\$145,000	20,624
\$150,000	20,974
\$155,000	21,313
\$160,000	21,643
\$165,000	21,969
\$170,000	22,289
\$175,000	22,600
\$180,000	22,905
\$185,000	23,199
\$190,000	23,486
\$195,000	23,766
\$200,000	24,039
\$205,000	24,307
\$210,000	24,570
\$215,000	24,827
\$220,000	25,077
\$225,000	25,323
\$230,000	25,563
\$235,000	25,799
\$240,000	26,032
\$245,000	26,259
\$250,000	26,480
\$255,000	26,695
\$260,000	26,905
\$265,000	27,111
\$270,000	27,316
\$275,000	27,517
\$280,000	27,712
\$285,000	27,903
\$290,000	28,086
\$295,000	28,262
\$300,000	28,438

BLUE CROSS AND BLUE SHIELD OF VERMONT
2021 ASSOCIATION HEALTH PLAN RATING PROGRAM FILING

EXHIBIT 6B

POOLING POINT by MEMBERSHIP

Membership (Current Month)	Pooling Limit
0 to 299	\$70,000
300 to 499	\$90,000
500 to 999	\$110,000
1,000 to 1,499	\$145,000
1,500 to 1,999	\$170,000
2,000 to 2,499	\$190,000
2,500 to 2,999	\$215,000
3,000 to 3,999	\$235,000
4,000 to 4,999	\$275,000
5,000 to 7,499	\$300,000
7,500 to 9,999	\$350,000
10,000+	\$400,000

SERFF Tracking #:	BCVT-132360219	State Tracking #:		Company Tracking #:	
State:	VermontGMCB	Filing Company:	BCBSVT		
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other				
Product Name:	2021 BCBSVT AHP Rating Program Filing				
Project Name/Number:	/				

Supporting Document Schedules

Bypassed - Item:	Civil Union Rating Requirements
Bypass Reason:	Not required.
Attachment(s):	
Item Status:	
Status Date:	

Satisfied - Item:	Filing Compliance Certification
Comments:	
Attachment(s):	2021 BCBSVT AHP Rating Program Filing - Rate Filing Certification.pdf
Item Status:	
Status Date:	

Bypassed - Item:	Third Party Filing Authorization
Bypass Reason:	BCBSVT does not use a Third Party to submit filings.
Attachment(s):	
Item Status:	
Status Date:	

Satisfied - Item:	Cover Letter
Comments:	
Attachment(s):	2021 BCBSVT AHP Rating Program Filing - Cover Letter.pdf
Item Status:	
Status Date:	

Satisfied - Item:	F106 Form
Comments:	
Attachment(s):	2021 BCBSVT AHP Rating Program Filing - F106 Form.pdf
Item Status:	
Status Date:	

Satisfied - Item:	Plain Language Summary
Comments:	
Attachment(s):	2021 BCBSVT AHP Rating Program Filing - Plain Language Summary.pdf

State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Item Status:	
Status Date:	
Satisfied - Item:	Appendix A
Comments:	
Attachment(s):	2021 BCBSVT AHP Rating Program Filing - Appendix A.pdf
Item Status:	
Status Date:	
Satisfied - Item:	Response to 2021 AHP Rating Program Inquiry Letter 1
Comments:	
Attachment(s):	Response to 2021 AHP Rating Program Inquiry Letter 1.pdf Response to 2021 AHP Filing 05.07.2020 Inquiry – Q6 (SERFF).xlsx
Item Status:	
Status Date:	
Satisfied - Item:	Response to 2021 AHP Rating Program Inquiry Letter 2
Comments:	
Attachment(s):	Response to 2021 AHP Rating Program Inquiry Letter 2.pdf
Item Status:	
Status Date:	
Satisfied - Item:	Response to 2021 AHP Rating Program Inquiry Letter 3
Comments:	
Attachment(s):	Response to 2021 AHP Rating Program Inquiry Letter 3.pdf
Item Status:	
Status Date:	

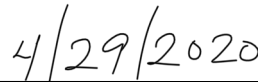
SERFF Tracking #:	BCVT-132360219	State Tracking #:	Company Tracking #:
State:	VermontGMCB	Filing Company:	BCBSVT
TOI/Sub-TOI:	ML02 Multi-Line - Other/ML02.000 Multi-Line - Other		
Product Name:	2021 BCBSVT AHP Rating Program Filing		
Project Name/Number:	/		

Attachment Response to 2021 AHP Filing 05.07.2020 Inquiry Q6 (SERFF).xlsx is not a PDF document and cannot be reproduced here.

I HEREBY CERTIFY that I have reviewed the applicable filing requirements for this filing, and, to the best of my knowledge, the filing complies with all applicable statutory and regulatory provisions for the state of Vermont

A handwritten signature in cursive script, appearing to read "Ruth Greene", written over a horizontal line.

Ruth Greene
Vice President, Treasurer & Chief Financial Officer

A handwritten date "4/29/2020" written in a simple, legible font, positioned above a horizontal line.

Date

April 30, 2020

Thomas Crompton
Health Systems Finance Associate Director
Green Mountain Care Board
144 State Street
Montpelier, Vermont 05602

**Subject: Blue Cross and Blue Shield of Vermont - NAIC # 53295
2021 Association Health Plan Rating Program Filing**

Dear Mr. Crompton:

Attached for the Green Mountain Care Board's review and approval is Blue Cross and Blue Shield of Vermont's 2021 Association Health Plan Rating Program Filing. As directed by the Board, this filing combines the various factor filings for large group rating components (trend, large claims, benefit relativity, administrative fees and contribution to reserve, and the formula itself) into a single filing.

Please let me know if we can answer any questions or provide further information during your review.

Sincerely,



Ruth Greene

cc: Paul Schultz/BCBSVT
Martine Lemieux/BCBSVT



Vermont Department of Financial Regulation

Health Filing Form F-106

NAIC#: 53295 Transmittal Date: 04-30-2020

Company Name: Blue Cross and Blue Shield of Vermont

Address: PO Box 186

City, State, Zip: Montpelier, VT 05601-0186

Phone: () (802) 371-3450 Contact Person: Alison Partridge

2021 BCBSVT AHP Rating Program Filing

Amends a previously filing, Departmental File No.:

Approval Date:

Type of Filing: Form(s) X Rate(s)

Completely and accurately identify this product filing. If one of the following categories does not describe the product filing, then add comments below (check all that apply):

Accident Only

AD&D

Advertising

Blanket

Cancer Expense

Conversion

Critical Illness

Dental

Disability

Home Health Only

Hospital Indemnity

Limited Benefit

Long Term Care

Qualified

Non-Qualified

Major Medical

Medicare Supplement

Miscellaneous

Nursing Home Only

Organ Transplant

Prescription Drug

Student/Athlete

Stop Loss/Excess Risk

Travel

Vision

X Other (explain)

Comments: Health

MANDATORY - Filing Fee Information:

1. State of Domicile: Vermont

2. A: Filing fee for the Company's State of Domicile: 150.00

B: Amount of filing fee being submitted with this filing: 150.00

3. Is this fee based on state of domicile's retaliatory fee? Yes No X

4. Explain how each part of the fee was determined, show all calculations (use a separate sheet if necessary):

5. Fee calculated by: (Print Name) Jude Dave (Signature) Jude Dave

Failure to accurately and fully complete this form will result in the filing being rejected.

08/17

**Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Rating Program Filing
Plain Language Summary**

Blue Cross and Blue Shield of Vermont (BCBSVT) is committed to the health of Vermonters, outstanding member experiences and responsible cost management for all of the people whose lives we touch. By pooling the populations covered by our products, we protect individuals from the unaffordable and potentially ruinous costs associated with significant illnesses or injuries. Our products promote preventive care, health maintenance, and health improvement, and we have in place strong utilization management programs that support members who require medical care and assure that they have access to high value care while avoiding unnecessary costs.

BCBSVT also works with providers to dampen cost increases through reimbursement strategies that include incentives to both provide and properly manage care. Our vision is a transformed health care system in which every Vermonter has health care coverage and receives timely, effective, affordable care. None of this work is possible unless BCBSVT remains financially healthy, and that requires premium rates that cover the medical expenses of the populations served.

BCBSVT performs association health plan premium rating on a case-by-case basis. The rating process uses a formulaic approach that blends recent group claims experience with a manual rate according to a credibility formula. This filing establishes the rating formula, manual rate and accompanying factors that will be used for association health plan rating beginning upon approval of this filing.

The filing describes in detail the formula used, along with each of the factors included in that formula. These include large claims pooling factors, medical and pharmacy trends, and benefit relativities, along with the development of the manual rate. In addition, the filing details the calculation of administrative charges, the net cost of reinsurance, contribution to reserve, and state and federal assessments, all of which are included in the rate development.

BCBSVT is proposing paid trends of 7.7 percent for medical claims and 11.3 percent for pharmacy claims, for a total combined trend of 8.5 percent. Our proposed manual rate, the projected average calendar year 2021 paid claims per member per month for association health plans impacted by this filing, is \$632.81.

A contribution to reserves is required in order to maintain an adequate level of surplus. Surplus is a critical consumer protection that allows subscribers to receive needed care and providers to continue to receive payments for their services in the event of unforeseen adverse events that may otherwise impact BCBSVT's ability to pay claims. The contribution to reserves established in this filing will allow us to maintain a level of reserves that is in compliance with that ordered by the Vermont Department of Financial Regulation.

Unless otherwise noted, all brand and generic formulations of a product are considered specialty.

Green = Drugs distributed exclusively by Accredo.

Red = Drugs distributed by Accredo as part of a limited distribution network.

Blue = Drugs that are designated specialty but not dispensed by Accredo.

ALPHA 1 DEFICIENCY

Aralast NP[®]
Glassia[™]
Prolastin C[®]
Zemaira[®]

ANTICOAGULANT

Arixtra[®]* (fondaparinux sodium)
 Fragmin[®]*
 Iprivask[®]
 Lovenox[®]* (enoxaparin sodium)

ASTHMA & ALLERGY

Cinqair[®]
 Dupixent[®]
Fasenra[™]
Nucala[®]
Oralair[®]
Xolair[®]

BLOOD CELL DEFICIENCY

Aranesp[®]
Cablivi[®]
Doptelet[®]
 Epogen[®]
 Fulphila[™]
 Granix[™]
 Leukine[®]
Mircera[®]
Mozobil[®]
 Mulpleta[®]
 Neulasta[®]
 Neupogen[®]
 Nivestym[™]
 Nplate[®]
 Procrit[®]
Promacta[®]
 Retacrit[™]
Tavalisse[™]
 Udenyca[™]
 Zarxio[™]

CANCER

Abraxane[®]
Adcetris[™]
 Afinitor[®]
Alecensa[®]
Aliqopa[™]
Alunbrig[™]
 Arranon[®]
Arzerra[®]
Asparlas[™]
Avastin[®]
Azedra[®]
Balversa[™]
Bavencio[®]
Beleodaq[™]
 Belrapzo[®]
 Bendamustine[®]
 Bendeka[™]
Besponsa[™]
Blinicyto[™]
Bortezomib
Bosulif[®]
Braftovi[™]
Cabometyx[™]
Calquence[®]
Caprelsa[®]
Cometriq[™]
Copiktra[™]
Cotellic[®]
 Cyramza[™]

CANCER (cont'd)

Dacogen[®] (decitabine)
 Darzalex[®]
Daurismo[™]
 Eligard[®]
Elzonris[™]
 Empliciti[™]
Erbitux[®]
Erivedge[™]
Erleada[™]
Erwinaze[®]
Evomela[™]
 Farydak[®]
 Firmagon[®]
Folotyn[®]
Gazyva[™]
Gilotrif[™]
 Gleevec[®] (imatinib)
 Halaven[™]
Herceptin[®]
Herceptin Hylecta[™]
Hycamtin[®] (capsules)
 Hycamtin[®] (topotecan injection)
Ibrance[®]
Iclusig[®]
Idhifa[®]
Imbruvica[™]
Imfinzi[™]
Imlygic[™]
Inlyta[®]
Inrebic[®]
Intron A[®]
Iressa[®]
 Istodax[®]
Ixempra[®]
Jakafi[™]
 Jevtana[®]
Kadcyla[™]
 Kanjinti[™]
Kepivance[®]
Keytruda[®]
 Kisqali[®]
 Kisqali Femara[®]
Kymriah[™]
Kyprolis[®]
Lartruvo[™]
Lenvima[™]
Libtayo[®]
Lonsurf[®]
Lorbrena[®]
Lumoxiti[™]
Lutathera[®]
 Lupron Depot[®]
Lynparza[™]
Marqibo[®]
Matulane[®]
Mekinist[™]
Mektovi[®]
 Mvasi[™]
Mylotarg[™]
Nerlynx[™]
Nexavar[®]
Ninlaro[®]
Nubeqa[®]
 Odomzo[®]
Onivyde[™]
 Opdivo[®]
 Pegasys[®]
 Peg-Intron[®]
Perjeta[™]
 Piqray[®]
Polivy[™]
Pomalyst[®]
 Portrazza[™]

CANCER (cont'd)

Poteligeo[®]
 Proleukin[®]
Provenge[®]
Purixan[™]
Revlimid[®]
Rituxan[®]
 Rituxan Hycela[®]
Rozlytrek[™]
Rubraca[™]
 Rydapt[®]
 Sprycel[®]
Stivarga[®]
Sutent[®]
Sylatron[™]
Sylvant[™]
Synribo[™]
Tafinlar[®]
Tagrisso[™]
Talzenna[™]
Tarceva[®] (erlotinib)
 Targretin[®] (bexarotene)
 Tassigna[®]
Tecentriq[™]
 Temodar[®] (temozolomide)
Thalomid[®]
Tibsovo[®]
 Torisel[®] (temsirolimus)
 Treanda[®]
Turalio[™]
Tykerb[®]
Unituxin[™]
Valchlor[™]
Valstar[®]
Vantas[®]
 Vectibix[®]
 Velcade[®]
Venclexta[™]
Verzenio[™]
Vidaza[®] (azacitidine)
Vistogard[®]
Vitrakvi[®]
Vizimpro[®]
Votrient[®]
Vyxeos[™]
Xalkori[®]
 Xeloda[®] (capecitabine)
 Xgeva[™]
Xofigo[®]
Xospata[®]
Xpovio[™]
Xtandi[®]
Yervoy[™]
Yescarta[™]
Yondelis[®]
 Yonsa[®]
Zaltrap[®]
Zejula[™]
Zelboraf[™]
 Zoladex[®]
Zolinza[®]
 Zometa[®] (zoledronic acid)
Zydelig[®]
 Zykadia[™]
Zytiga[™] (abiraterone acetate)

CONTRACEPTIVES

Kyleena[™]
Liletta[™]
Mirena[®]
Nexplanon[®]
Paragard[®]
Skyla[®]

CYSTIC FIBROSIS

Bethkis®
 Cayston®
 Kalydeco™
 Kitabis Pak™
 Orkambi™
 Pulmozyme®*
 Symdeko™
 Tobi® (tobramycin)
 Tobi Podhaler™

ENDOCRINE DISORDERS

Aveed™
 Crystiva®
 Egrifta®
 Korlym®
 Lupaneta Pack™
 Lupron Depot-Ped®
 Myalept™
 Natpara®
 Samsca®
 Sandostatin® (octreotide acetate)
 Sandostatin LAR Depot®
 Signifor® LAR
 Signifor®
 Somatuline Depot®
 Somavert®
 Supprelin LA®
 Testopel™
 Triptodur™
 Xermelo™

ENZYME DEFICIENCIES

Adagen®
 Aldurazyme®
 Brineura™
 Carbaglu®
 Cerdelga™
 Cerezyme®
 Cystadane®
 Elaprase®
 Ellyso™
 Fabrazyme®
 Galafold™
 Kanuma™
 Kuvan®
 Lumizyme™
 Mepsevii™
 Naglazyme®
 Nityr™
 Orfadin® (nitisinone)
 Palynziq™
 Ravicti™
 Revcovi™
 Strensiq™
 Sucraid®
 Vimizim™
 VPRIV™
 Zavesca® (miglustat)

GROWTH DEFICIENCY

Genotropin®
 Humatrope®
 Increlex®
 Macrilen®
 Norditropin®
 Nutropin AQ®
 Omnitrope®
 Saizen®
 Serostim®
 Zomacton®
 Zorbtive®

HEMOPHILIA

Advate®
 Adynovate™
 Afstyl®
 Alphanate®
 Alphanine SD®
 Alprolix™
 Bebulin®
 Benefix®
 Coagadex®
 Corifact®
 DDAVP® (desmopressin acetate) (oral/nasal forms are not specialty)
 Eloctate™

HEMOPHILIA (cont'd)

Feiba®
 Fibryga®
 Hemlibra®
 Hemofil M®
 Humate-P®
 Idelvion®
 Ixinity®
 Jivi®
 Koate®
 Kogenate FS®
 Kovaltry®
 Mononine®
 Novoeight®
 Novoseven RT®
 Nuwiq®
 Obizur™
 Profilnine SD®
 Rebinyn®
 Recombinate™
 RiaSTAP®
 Rixubis™
 Stimate®
 Tretten®
 Vonvendi™
 Wilate®
 Xyntha®

HEPATITIS C

Epclusa® (sofosbuvir/velpatasvir)
 Harvoni® (ledipasvir/sofosbuvir)
 Mavyret™
 Ribavirin (Rebetol®, Ribasphere®, Ribapak®, Moderiba™)
 Sovaldi®
 Viekira Pak®
 Vosevi®
 Zepatier®

HEREDITARY ANGIOEDEMA

Berinert®
 Cinryze®
 Firazyr® (icatibant)
 Haegarda®
 Kalbitor®
 Ruconest®
 Takhzyro™

HIGH BLOOD CHOLESTEROL

Juxtapid®

IDIOPATHIC PULMONARY FIBROSIS

Esbriet™
 OFEV®

IMMUNE DEFICIENCY

Bivigam™
 Cutaquig®
 Cuvitru™
 CytoGam®
 Flebogamma®
 Gamastan S-D®
 Gammagard Liquid®
 Gammagard S-D®
 Gammaked™
 Gammaplex®
 Gamunex-C®
 Hizentra™
 HyQvia™
 Octagam®
 Panzyga®
 Privigen®

INFERTILITY¹

(oral forms are not specialty)
 Bravelle®
 Cetrotide®
 Chorionic Gonadotropin (brands include Novare®, Pregnyl®)
 Crinone®
 Endometrin®
 Follistim AQ®

INFERTILITY¹ (cont'd)

Ganirelix (ganirelix acetate)
 Gonal-F®
 leuprolide
 Menopur®
 Ovidrel®
 progesterone injection

INFLAMMATORY CONDITIONS

Actemra®
 Arcalyst®
 Benlysta®
 Cimzia®
 Cosentyx™
 Enbrel®
 Entyvio™
 Humira®
 Humira® (Pediatric)
 Ilaris®
 Ilumya™
 Inflectra™
 Kevzara®
 Kineret®
 Olumiant®
 Orencia®
 Otezla®
 Remicade®
 Renflexis™
 Rinvoq™
 Siliq™
 Simponi™
 Simponi Aria®
 Skynizi™
 Stelara™
 Taltz®
 Tremfya™
 Xeljanz®
 Xeljanz XR®

IRON TOXICITY

Exjade® (deferasirox)
 Ferriprox®
 Jadenu™

MISCELLANEOUS DISEASES

Acthar H.P. Gel®
 Actimmune®
 Apokyn®
 Arestin®
 Arikayce®
 Austedo®
 Botox®
 Botox Cosmetic®
 Ceprotin™
 Cheno dal®
 Cholbam®
 Cystagon®
 Daraprim®
 Diacomit®
 Duopa™
 Dysport®
 Endari™
 Epidiolex®
 Gamifant®
 Gattex®
 Gocovri™
 Hemangeol™
 Hetlioz™
 Inbrija™
 Ingrezza™
 Jynarque™
 Keveyis®
 Krystexxa®
 Makena™ (hydroxyprogesterone caproate)
 Myobloc®
 Northerna™
 Nourianz™
 Nuplazid™
 Ocaliva™
 Onpattro™
 Prialt®
 Procysbi™
 Probuphine®
 Prothelial™
 Qutenza®
 Sabril® (vigabatrin)
 Sinuva™
 Solesta®

1. Some products may be dispensed from Accredo and/or Freedom Fertility Pharmacy
 2. Xyrem® is distributed through Express Scripts Specialty Distribution Services, Inc.

MISCELLANEOUS DISEASES (cont'd)

Soliris®
Sprix®
Spravato™
Sublocade™
Tegsedi™
Thiola®
Thyrogen®
 Ultomiris™
Varithena®
Vigadrone™
 Vivitrol®
Vyleesi™
Vyndamax™
Vyndaqel®
Wakix®
Xenazine® (tetrabenazine)
 Xeomin®
Xiaflex™
Xuriden™
Xyrem®²
Zecuity®
Zulresso™

MULTIPLE SCLEROSIS

Ampyra® (dalfampridine)
Aubagio®
 Avonex®
 Betaseron®
 Copaxone® (glatiramer, Glatopa®)
 Extavia®
 Gilenya®
Lemtrada®
Mavenclad®
Mayzent®
 mitoxantrone®
Ocrevus®
 Plegriby®
 Rebif®
Tecfidera®

MULTIPLE SCLEROSIS (cont'd)

Tysabri®

MUSCULAR DYSTROPHIES

Emflaza™
Exondys 51™
Firdapse®
Radicava™
Ruzurgi®
Spinraza™
Zolgensma®

OPHTHALMIC CONDITIONS

Cystaran™
Eylea®
Iluvien™
Jetrea®
Lucentis®
Luxturna™
 Macugen®
Oxervate™
 Ozurdex™
 Retisert®
Visudyne®
Yutiq™

OSTEOARTHRITIS

Durolane®
 Euflexxa®
 Gel-One®
 Gelsyn-3™
Genvisc 850®
 Hyalgan®
 Hymovis®
 Monovisc®
 Orthovisc®
Sodium hyaluronate
 Supartz FX®
 Synvisc®
 Synvisc-One®
 Visco-3™
Zilretta™

OSTEOPOROSIS

Boniva® (ibandronate) (*oral forms are not specialty*)
 Evenity™
 Forteo®
 Prolia™
 Reclast® (zoledronic acid)
 Tymlos™

PULMONARY

HYPERTENSION

Adcirca® (tadalafil)
Adempas®
Flolan® (epoprostenol)
Flolan Diluent® (epoprostenol diluent)
Letairis® (ambrisentan)
Opsumit®
Orenitram™
Remodulin® (treprostinil)
Remodulin Diluent®
 Revatio® (sildenafil citrate)
Tracleer® (bosentan)
Tyvaso®
Uptravi®
Velettri®
Ventavis®

RESPIRATORY SYNCYTIAL VIRUS

Synagis®

1. Some products may be dispensed from Accredo and/or Freedom Fertility Pharmacy
 2. Xyrem® is distributed through Express Scripts Specialty Distribution Services, Inc.

May 18, 2020

Mr. Kevin Ruggeberg, A.S.A., M.A.A.A.
Consulting Actuary
Lewis & Ellis, Inc.

**Subject: Your 05/07/2020 Questions re: Blue Cross and Blue Shield of Vermont
2021 Association Health Plan Filing (SERFF Tracking #: BCVT-132360219)**

Dear Mr. Ruggeberg:

In response to your requests dated May 7, 2020, here are *your questions* and our answers:

1. Has the form filing been approved by DFR?

The AHP form filing (BCVT-132260352) was submitted to DFR on February 13, 2020. As of May 15, 2020, the filing status is listed as "Pending State Action."

2. How much enrollment is anticipated for 2021 on the AHP product?

We have not undertaken any formal membership projections for this product. The AHP form filing (BCVT-132260352) identifies an entity that is interested in offering an AHP product in 2021. However, this entity, of approximately 1,700 lives, is still undergoing the licensure process and has not formalized any decisions about 2021 coverage.

BCBSVT intends to aggressively pursue other market opportunities as they arise. We cannot speculate at this time as to the membership potential of new sales.

3. How do the utilization trends in Vermont compare to the Blue Trend Survey or other nationwide utilization trends?

According to one survey released prior to the onset of the COVID-19 pandemic, medical trend was expected to increase in 2020¹. One of the reasons listed for an escalation in trend was the utilization of services from individuals with chronic conditions.

A proprietary source notes increasing trends, with a listed source of medical utilization increases being the greater use of diagnostic tests and treatments.

¹ Medical Cost Trend: Behind the Numbers 2020, page 10
<https://www.pwc.com/us/en/industries/health-industries/assets/pwc-hri-behind-the-numbers-2020.pdf>

Particular to Vermont, we note that in its large group filing, CIGNA developed both national and Vermont-specific medical trends². The 2020 Vermont trend is 7.96 percent, compared to the national trend of 6.75 percent. While CIGNA commented they set their utilization and mix-of-service trend nationally, they noted, "In 2019, nationally as well in VT, we saw increased utilization above previous trends and expected forecasts leading to an increase vs. plan."³

In comparison, the filed medical utilization trend on this filing is lower than the approved trend on the BCBSVT Q3 2019 Large Group filing (BCVT-131835151), which is favorable relative to the national trends noted above.

4. Provide the quantitative support for the unit cost trends on pages 6 and 7 of the Actuarial Memorandum.

This question involves confidential and proprietary information and has been provided under separate cover.

In preparing the response to this objection, we discovered a formula error in the unit cost trend development. The correct BCBSVT Non-Managed Care unit cost trend is 4.4 percent rather than the reported 4.3 percent. The BCBSVT Managed Care trend remains 4.4 percent.

5. The table Calculation of the Manual Rate (Actives) in the actuarial memorandum (pg 20) appears to contain errors. For example, the intended value for C is unclear and neither E nor G follows the formula shown. Please provide a corrected version.

A corrected version of the table is below. There is no change to the manual rate.

Calculation of the Manual Rate (Actives)		
Incurred and Paid Experience Paid Claims, capped at \$400,000	A	\$111,400,843
Estimated IBNR	B	\$817,150
Expected Claims between \$400,000 and \$1,000,000	C	\$2,617,537
Overall Paid Trend factor (8.6% for 24 months) ⁴	D	1.17869
Projected Total Paid Claims	$E = (A + B + C) \times D$	\$135,355,427
Total Member Months	F	213,895
Manual Rate	$G = E / F$	\$632.81

6. Please provide all exhibits in excel format.

Please see the attached file *Response to 2021 AHP Filing 05.07.2020 Inquiry - Q6.xlsx* for the requested exhibits.

² GMCB-001-20rr.

³ Response to Objection 7:

https://ratereview.vermont.gov/sites/dfr/files/Objection%20Letter%20Cigna%20Responses%204_8_20_v2.pdf

⁴ Includes the impact of the pharmacy contract adjustment.

7. *It appears that no adjustments were made to the experience for potential impacts of COVID-19 on future costs. Please describe the Company's rationale for not incorporating an impact.*

The COVID-19 pandemic introduces unique and immense uncertainty into actuarial projections of 2021 claims costs. The underlying demand for services that is reflected in our baseline trends certainly exists; however, it is far from clear whether the supply of those services will be affected by the pandemic or its fallout, thereby impacting utilization. Furthermore, there is little to no clarity related to additional costs that should be expected due to COVID-19 and with respect to the deferral of non-emergent care while social distancing measures are in effect.

There are four main categories of considerations regarding the cost of health care services in 2021.

Direct costs of COVID-19 treatment: Information is emerging on the cost of treating a COVID-19 patient experiencing varying degrees of severity and in different settings. However, the overall infection rate remains murky. While the current wave of infection seems to be diminishing, it is possible that additional waves will follow when social distancing is relaxed, at the onset of the winter flu season, or even as a continual challenge fueled by a lower but steady rate of transmission. It is likely that infection will continue until a vaccine is available. The intermediate-term cost of follow-up care for patients who have recovered from an initial bout with COVID-19 could be considerable. These additional costs will be countered by additional deferrals of non-emergent care should social distancing measures become necessary into 2021. It cannot be predicted with any degree of certainty which directional impact will be greater in 2021.

Costs of COVID-19 preventive services: Most experts suggest that the fastest a vaccine could reach the market is within 12 to 18 months. This time frame would place vaccine availability squarely within the time period covered by this filing. While there has been some speculation as to the potential cost of administering the vaccine, estimates vary widely. Current law would require that insurers cover these costs with no member liability. Depending upon their availability and the extent to which they play a role in the government response to the pandemic, antibody tests may be pervasively used as well. These, too, would be covered at zero cost share. Future government actions will dictate the extent to which these costs impact insurer liability in 2021.

Impact of the deferral of non-emergent care: Some portion of deferred care will be foregone altogether, while other services will have only been delayed. The timing of the return of the delayed care will depend upon the timing and severity of additional waves of infection and periods of social distancing. It seems likely that many providers will be operating at or above capacity for at least a portion, and perhaps a significant portion, of 2021 as they endeavor to meet demand and to make up for lost revenue during periods of social distancing. Furthermore, there are concerns about a worsening of the health status of the population following the delay or elimination of preventive and other care. Mental health is of particular concern given the additional stress generated by the health and financial crisis. It is clear that population health will worsen as a result of the pandemic, but the magnitude of the deterioration is difficult to predict.

Impact of economic factors: The covered population itself may change substantially from the currently-enrolled population. It seems likely that continued unemployment will reduce the size of the association health plan market. There are some selection concerns inasmuch as younger, presumably healthier, employees may be more likely to be let go. Naturally, there is a revenue impact here as well, as uncollectible premium may increase.

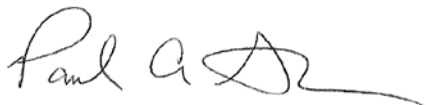
The various impacts of the COVID-19 pandemic will impact 2020 and 2021 costs, and they will do so in both an upward and a downward direction. Based on information currently available, it is difficult to so much as predict an overall directional impact for the time period covered by this filing, particularly because future government actions will drive the timing and magnitude of many of the above considerations. We believe that it is entirely reasonable to forecast that the ongoing pandemic will increase claims costs beyond the levels projected within this filing. BCBSVT has long maintained that a pandemic is one reason to hold surplus. Given that the designed function of policyholder reserves is to weather the types of uncertainties created by a pandemic without resorting to extreme rate fluctuations, any increased cost due to the COVID-19 pandemic will be funded through policyholder reserves. Therefore, at the direction of management, the addition of a COVID-related factor of any magnitude would be offset by a reduction in CTR of equal and opposite magnitude, resulting in no change to the association health plan rates calculated based upon the formula and factors herein. Furthermore, based on information known at the time of filing, we see no reason to believe that the best estimate of the pandemic impact is a *decrease* in 2021 claims costs. BCBSVT senior management views BCBSVT's primary responsibility to Vermonters for the duration of the COVID-19 crisis as maintaining continuity of coverage and claims payments. This necessitates that BCBSVT continues to rate appropriately in order to provide flexibility to customers and providers who are struggling financially. We therefore include a COVID-19 impact of zero within these formulae and factors.

8. Please confirm that the "Facility" and "Professional" claims used to develop utilization and unit cost trends exclude claims relating to pharmaceuticals covered by the medical benefit.

We confirm the facility and professional claims in utilization and unit cost trend exclude pharmaceuticals covered by the medical benefit.

Please let us know if you have any further questions, or if we can provide additional clarity on any of the items above.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Schultz", with a stylized flourish at the end.

Paul Schultz, F.S.A., M.A.A.A.

June 9, 2020

Mr. Michael Barber
General Counsel
Green Mountain Care Board

Subject: Your 06/03/2020 Questions re: Blue Cross Blue Shield of Vermont 2021 Large Group Filing (SERFF Tracking #: BCVT-131835151; GMCB Docket No. GMCB-002-20rr); The Vermont Health Plan 2021 Large Group Filing (SERFF Tracking #: BCVT-131835292; GMCB Docket No. GMCB-003-20rr); Blue Cross Blue Shield of Vermont 2021 Association Health Plan Filing (SERFF Tracking #: BCVT-132360219; GMCB Docket No. GMCB-004-20rr)

Dear Mr. Barber:

Below, we respond to the Board's questions dated June 3, 2020, about the impact of the COVID-19 pandemic over the past three months and going forward. Before doing so, we provide some context and perspective for the Board's questions and our responses.

Nationwide, economists, actuaries, epidemiologists and public health officials are grappling with these questions, but no clear answers have emerged. As we explained in our response to Question 4 of the May 6 objections, BCBSVT cannot predict how the pandemic will play out. The overall financial impact of the pandemic on BCBSVT will include numerous factors that remain unknown, such as: additional expenses related to the pandemic and emergency state mandates; forgiven premiums through extended grace periods and employer outreach; deferred and foregone health care; the performance of financial markets, which among other effects directly impacts our reserves; and the unknown future curve of COVID-19 infections. There is no way to predict now what the overall financial impact of the pandemic will be over the course of 2020 and 2021.

The above-referenced rate requests for 2021 are based on actuarial analysis that was nearly complete before the pandemic. It represents our current best actuarial judgment for the cost of providing health care to our members in 2021 without regard to the impacts of the pandemic. If the pandemic increases our costs (because of deferral of care from 2020 into 2021, lost premiums, COVID-19 expenses, and so forth), the additional costs will be paid out of reserves. If the pandemic decreases costs below what would normally be expected for 2020 and/or 2021, the money saved will be added to policyholders' reserves and will mitigate future rate increases. As we explained in this and other filings, we view this as the proper function of reserves.

This outcome is also consistent with BCBSVT's Large Group and QHP experience over the years— each year, BCBSVT has sustained losses in these lines of business, has funded those losses out of policyholder reserves, and has not sought to apply a notional loss in Year N to its proposed rates for Year N+1. Similarly, it cuts against sound actuarial, regulatory, and competitive practice to apply a notional 2020 gain to 2021 rates.

Finally, the existing medical loss ratio (MLR) rebate process functions to return any and all excess gains to policyholders. Under Vermont and federal law, every dollar of gain beyond a certain threshold—in the case of insured large groups, the threshold is 85 percent—must be returned to policyholders in the form of a rebate. BCBSVT has always adhered and will always adhere to that process.

We note that a number of insurers nationwide have received favorable publicity by accelerating rebate payments for the 2019 and/or 2020 plan years. BCBSVT does not expect to owe rebates for either 2019 or 2020, *even in the implausible event that none of the care deferred this spring returns in the balance of 2020*, because our cost of insurance (that is, administrative costs plus contribution to policyholder reserves) is priced far below the maximum allowed by MLR thresholds. Unlike insurers who have issued rebates for 2019 or 2020, we have no rebate payments we could accelerate at this time. Our MLR remains and is expected to remain well above the Vermont and federal threshold. Said differently, we never charge these excess amounts to policyholders in the first place. We cannot return what we do not collect.

With these principles in mind, we will endeavor to answer the Board's questions as transparently and completely as possible. But we caution that focusing this rate review process on the current or predicted impacts of the pandemic will not be productive, because critical questions simply cannot be answered at this time.

In response to your requests dated June 3, 2020, here are [your questions](#) and our answers:

1. [Provide data on utilization and costs by service category for the 15-month period ending April 2020 and quantify the impact of utilization dampening associated with COVID-19, the value thereof, and the impact on reserves.](#)

Allowed costs by major service category for the 15-month period ending April 2020 can be found in the table on the next page. We note that these data would be entirely misleading without completing the claims—that is, because the reporting and payment of medical claims is not instantaneous, many services performed during the month of April, for instance, will not yet have appeared in the data by April 30 or even May 31. We have therefore applied the completion factors from our financial reporting models (best estimates before margin, as reviewed by independent auditors) to the allowed costs. For simplicity, we have applied the same completion factors to all medical service categories.

BCBSVT/TVHP Large Group Completed Medical Allowed Claims					
Month	Members	IP Facility	OP Facility	Professional	Other
201901	15309	\$1,849,441	\$3,496,340	\$1,412,072	\$938,285
201902	15090	\$2,020,065	\$3,069,427	\$1,230,337	\$858,711
201903	15083	\$1,183,899	\$3,401,108	\$1,285,684	\$959,154
201904	14853	\$1,873,518	\$3,258,624	\$1,285,636	\$976,235
201905	14812	\$1,738,589	\$3,456,858	\$1,299,273	\$1,039,115
201906	14618	\$1,562,645	\$3,257,237	\$1,230,136	\$908,251
201907	13903	\$2,053,804	\$3,147,011	\$1,251,434	\$940,050
201908	13870	\$1,656,634	\$3,069,436	\$1,137,469	\$979,976
201909	13814	\$1,264,855	\$2,897,672	\$1,109,112	\$939,389
201910	13398	\$2,058,331	\$3,525,321	\$1,464,455	\$1,019,120
201911	13397	\$1,208,122	\$3,029,143	\$1,147,676	\$849,405
201912	13354	\$1,469,083	\$3,312,294	\$1,260,701	\$945,565
202001	9148	\$1,470,072	\$2,232,160	\$857,009	\$591,416
202002	9104	\$826,841	\$2,262,859	\$774,029	\$519,273
202003	9095	\$658,530	\$1,808,459	\$639,645	\$566,849
202004	8994	\$439,804	\$1,748,721	\$677,001	\$757,096

The April 30 financials included approximately \$2 million, or about 9 percentage points of risk-based capital, of underwriting gains associated with the utilization dampening impact of the response to the COVID-19 pandemic.

2. *You state that “[s]ome portion of deferred care will be foregone altogether, while other services will have only been delayed” and that “the timing of the return of delayed care will depend on the timing and severity of additional waves of infection and periods of social distancing.” Provide any analyses you have developed regarding the amount and value of care that has been or will be deferred as a result of COVID-19 and the efforts being taken to prevent its spread, the portion of this deferred care that will be foregone, the portion that will be delayed, and the time period over which the deferred care that has been delayed will return.*

At this time, we cannot develop sufficiently reliable or useful estimates to support analyses of the type referenced in this question. This follows because of the ongoing uncertainty around the impact of COVID-19. We continue to review relevant literature on this topic which provide helpful assessments of potential considerations but do not offer conclusions or predictions; a list of some of those sources is provided here:

- Society of Actuary COVID-19 Resources
<https://www.soa.org/programs/covid-19/research-podcast/>
- American Academy of Actuaries COVID-19 Resources
<https://www.actuary.org/coronavirus>
- Milliman COVID-19 Hub
<https://us.milliman.com/en/Health/Coronavirus-COVID-19>
- Oliver Wyman COVID-19 Hub
<https://www.oliverwyman.com/our-expertise/hubs/coronavirus.html>

We are working to analyze and estimate the kinds of impacts referenced in this question, because those estimates are critical to understanding the impact of COVID-19 on future rate requests and on policyholder reserves in the future. In other words, it is very much in BCBSVT's interests, including and extending beyond the current rate filings, to understand these impacts as soon as possible. However, we are still too early in the process, and still facing too many COVID-related uncertainties, to perform those analyses with sufficient certainty to present to the Board.

3. *You identified several potential costs associated with COVID-19, including direct costs of treatment, costs of a vaccine, and costs associated with a decline in the health status of the population and noted that "any increased cost due to the COVID-19 pandemic will be funded through policyholder reserves." Quantify the additional costs you expect to incur in connection with COVID-19 for the plans covered by the above filings, including the number of COVID-19 cases and projected costs per case, and the expected impact on reserves.*

As we described in our response to Question 4 of the May 6 objections, we have identified numerous potential costs associated with COVID-19, including the direct cost of care, follow-up care, vaccine costs, the impact of the deferral of non-emergent care, and the impact of economic factors. We cannot quantify those anticipated costs at this time because of the ongoing uncertainty around the impact of COVID-19. Among other things, we have no reliable basis to predict the future number of COVID-19 cases in Vermont or the cost of treating those patients. As noted above, we are working to analyze and estimate the kinds of impacts referenced in this question, because those estimates are critical to understanding the impact of COVID-19 on future rate requests and on policyholder reserves in the future. In other words, it is very much in BCBSVT's interests, including and extending beyond the current rate filings, to understand these impacts as soon as possible. However, we are still too early in the process, and still facing too many COVID-related uncertainties, to perform those analyses with sufficient certainty to present to the Board.

4. *Provide the number and percentage of cases of COVID-19 you have had in Vermont to date and the costs of these cases.*

As of June 1, 2020, 34 BCBSVT members had received inpatient treatment with a diagnosis of COVID-19, with allowed charges totaling \$1,175,016. Additionally, 80 BCBSVT members had received outpatient treatment with a diagnosis of COVID-19, with allowed charges totaling \$70,479. Further, 3,353 BCBSVT members had claims incurred in an outpatient setting related to a screening for COVID-19, with allowed charges totaling \$867,968. Lastly, 4,590 BCBSVT members had claims for COVID-19 testing, with allowed charges totaling \$567,015. Note that due to provider lag in reporting claims, the reported number of cases and treatment costs will likely increase as time passes.

The portion of the above figures attributable to the BCBSVT/TVHP insured large group line of business totals about \$250,000 in allowed charges.

5. *Provide the increase or decrease in the membership (number and percentage) in the BCBSVT and TVHP Large Group plans covered by the above filings during the current rating period.*

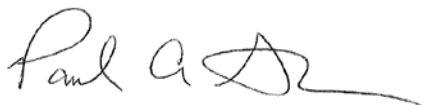
Vermont large groups have a variety of renewal dates throughout the calendar year. The concept of the “rating period” is therefore rather fluid for this market. We are interpreting the intention of your question to be to better understand how the economic crisis has impacted large group enrollment during the pandemic. We therefore provide in the table below the change in membership between January 31, 2020 and May 31, 2020, exclusive of groups with February, March, April or May anniversaries that did not renew with BCBSVT or TVHP.

Company	Enrollment Change	Percentage Change
BCBSVT	-137	-1.8%
TVHP	-3	-0.2%

It is important to note that BCBSVT has provided very flexible payment options for large groups throughout the pandemic and economic slowdown. None of the reductions in membership are due to cancelation for non-payment.

Please let us know if you have any further questions, or if we can provide additional clarity on any of the items above.

Sincerely,



Paul Schultz, F.S.A., M.A.A.A.

June 18, 2020

Mr. Kevin Ruggeberg, A.S.A., M.A.A.A.
Consulting Actuary
Lewis & Ellis, Inc.

**Subject: Your 06/16/2020 Questions re: Blue Cross and Blue Shield of Vermont
3Q 2020 Large Group Rating Program Filing (SERFF Tracking #: BCVT-131835151),
The Vermont Health Plan 3Q 2020 Large Group Rating Program Filing (SERFF Tracking #:
BCVT-131835292), and Blue Cross and Blue Shield of Vermont 2021 Association Health
Plan Filing (SERFF Tracking #: BCVT-132360219)**

Dear Mr. Ruggeberg:

In response to your requests dated June 16, 2020, here are *your questions* and our answers:

1. Provide further support for the assumptions regarding hospital budget increases in October 2020.

The *Fiscal Year 2019 Vermont Hospital Budget Year-End Actuals Reporting*¹ noted a budget-to-actual net patient revenue variance of -0.8%² and a budget-to-actual operating expense variance of 2.9%³. For hospitals under the jurisdiction of GMCB review, we increased the unit cost change at each facility by 2.1 percentage points, which is the increase in operating expenses rebased for the overall change in net patient revenue for the total of all facilities subject to GMCB review.

In recent hospital budget processes, the GMCB has adopted the concept of “rebased,” that is, assessing the increase for the following fiscal year as compared to actual revenue rather than budget revenue. We anticipate that this process will be followed for FY 2021 as well, which will reduce the approved increases by 0.8 percent.

However, hospitals must consider not only revenue but also expenses when making their budget requests. It is therefore reasonable to anticipate that budget-to-actual operating expenses will influence the budget requests. Unlike Exchange filings, where hospital budget requests are known in advance of the Board’s rate decision, the timing is such that we will not have an opportunity to incorporate actual hospital budget submissions into the Large Group factors in advance of the Board’s decision. It is therefore reasonable and appropriate to take a “best estimate” view of hospital budget expectations. Based on published expense data and our own market intelligence, we believe that hospital budget requests for FY 2021 will exceed those of previous years, even before any COVID-19 impacts are considered.

¹ <https://gmcboard.vermont.gov/sites/gmcb/files/Board-Meetings/FY19%20Actuals%20Report-%20updated%202.26.20%2012pm.pdf>

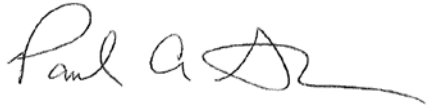
² Ibid, p. 7.

³ Ibid, p. 8.

The sum of the budget-to-actual variances, 2.1 percent, reflects the total assumed rebasing amount. We took the simplifying step of applying the same factor of 2.1 percent to all hospitals regulated by the GMCB.

Please let us know if you have any further questions, or if we can provide additional clarity on any of the items above.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Schultz", with a stylized flourish at the end.

Paul Schultz, F.S.A., M.A.A.A.