



May 6, 2020

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

Re: The Vermont Health Plan  
3Q 2020 LG Rating Program Filing  
SERFF Tracking #: BCVT-132350492

Dear Jude Daye:

We have been retained by the Green Mountain Care Board ("GMCB") to review the above referenced group products filing submitted on 4/23/2020. 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. How do the utilization trends in Vermont compare to the Blue Trend Survey or other nationwide utilization trends?
2. Provide quantitative support for the unit cost trends on page 10 of the Actuarial Memorandum.
3. Please provide Exhibits 2B, 2D, and 2E in excel format.
4. 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.
5. Please confirm that the proposed rates for BCBSVT and TVHP differ only in relation to the network differences, or describe and support all other differences.
6. Explain the apparent discrepancy between the "Impact of Formula and Factor Change" table in the memorandum and the "Manual Rate Development" table. The first shows a manual rate increase of 1.4% and an overall claims increase of 3.0%. The latter shows the manual rate increasing by about 9%.

7. Please clarify the precise meaning of the values in "Impact of Formula and Factor Change".
  - a. What is the credibility of the hypothetical group use to calculate these figures?
  - b. Provide the change in manual rate claims for a (hypothetical) 0% credibility group.
  - c. The description says that it reflects "the impact of the trend factors outlined in this filing on experience claims". Does the 1.6% include the anticipated impact of changes to experience claims themselves? If not, please quantify this impact.
8. Please list all differences between the prior rating manual and the proposed rating manual affecting insured groups, including age factor changes, etc.
9. For the insured groups affected by this filing in aggregate, compare the actual 2019 claims experience to the expected 2019 claims experience implied by last year's rate filing.
10. 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.
11. Provide actual administrative costs PMPM for 2019.

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 15, 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

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										\$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	

REDACTED

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		\$273.72							\$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		\$271.91			\$291.72
Jan-17	54,466	\$276.58	\$278.47	\$276.45	\$279.18	\$277.13	\$282.56		\$282.56			\$295.12
Feb-17	54,376	\$253.40	\$278.84	\$276.82	\$279.56	\$277.51	\$285.58		\$285.58			\$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		\$270.52			\$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	\$286.23
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	\$300.78			\$279.35	\$278.27
Jan-18	52,507	\$297.59	\$281.91	\$279.02	\$282.72	\$279.86	\$276.24	\$276.24			\$292.44	\$276.93
Feb-18	52,433	\$294.54	\$282.45	\$279.53	\$283.25	\$280.37	\$253.45	\$253.45			\$294.22	\$276.65
Mar-18	52,332	\$259.13	\$282.94	\$280.05	\$283.72	\$280.87	\$262.33	\$262.33			\$294.31	\$277.65
Apr-18	52,560	\$295.32	\$283.48	\$280.56	\$284.25	\$281.39	\$262.86	\$262.86			\$282.01	\$278.26
May-18	52,733	\$271.99	\$284.00	\$281.09	\$284.76	\$281.90	\$275.96	\$275.96			\$286.63	\$279.66
Jun-18	52,720	\$266.88	\$284.54	\$281.61	\$285.29	\$282.42	\$269.15	\$269.15			\$281.49	\$280.56
Jul-18	53,446	\$266.21	\$285.06	\$282.15	\$285.80	\$282.94	\$314.74	\$314.74	\$315.11		\$276.36	\$281.21
Aug-18	53,468	\$266.07	\$285.61	\$282.68	\$286.32	\$283.47	\$240.63	\$240.63	\$241.78		\$272.78	\$280.36
Sep-18	53,278	\$309.27	\$286.15	\$283.21	\$286.85	\$283.99	\$267.85	\$267.85	\$268.64		\$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	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	\$128.35	\$126.84							\$124.80
Nov-16	51,926	\$141.71	\$128.43	\$128.63	\$127.12	\$138.69		\$138.69				\$129.24
Dec-16	51,220	\$137.09	\$128.70	\$128.89	\$127.40	\$127.05		\$127.07				\$137.17
Jan-17	54,466	\$131.98	\$128.97	\$129.17	\$127.68	\$128.18		\$128.23				\$137.12
Feb-17	54,376	\$122.58	\$129.24	\$129.44	\$127.95	\$127.92		\$128.00				\$133.84
Mar-17	54,286	\$123.58	\$129.48	\$129.69	\$128.23	\$122.46		\$122.64				\$126.66
Apr-17	54,315	\$129.27	\$129.76	\$129.97	\$128.50	\$123.89		\$124.07				\$124.69
May-17	54,511	\$130.10	\$130.02	\$130.23	\$128.77	\$128.32		\$128.44				\$127.59
Jun-17	54,564	\$124.99	\$130.30	\$130.51	\$129.05	\$126.28		\$126.48				\$129.18
Jul-17	54,781	\$132.88	\$130.56	\$130.77	\$129.32	\$121.35		\$121.75				\$126.50
Aug-17	54,843	\$118.57	\$130.84	\$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				\$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	\$133.22
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		\$137.38		\$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		\$136.44		\$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	\$398.83	\$455.41	\$404.19	\$428.66	
Jan-17	54,466	\$408.56	\$407.53	\$404.05	\$408.35	\$404.80	\$410.04	\$410.04	\$410.24		\$432.89	
Feb-17	54,376	\$375.98	\$408.17	\$404.70	\$409.00	\$405.46	\$412.34	\$412.34	\$412.54		\$422.19	
Mar-17	54,286	\$384.78	\$408.76	\$405.34	\$409.59	\$406.12	\$384.56	\$384.56	\$384.61		\$401.89	
Apr-17	54,315	\$390.45	\$409.41	\$405.98	\$410.24	\$406.77	\$392.98	\$392.98	\$392.99		\$394.33	
May-17	54,511	\$402.95	\$410.03	\$406.61	\$410.88	\$407.41	\$382.26	\$382.26	\$382.25		\$392.57	
Jun-17	54,564	\$390.25	\$410.68	\$407.25	\$411.53	\$408.06	\$390.68	\$390.68	\$390.75		\$397.06	
Jul-17	54,781	\$442.08	\$411.31	\$407.88	\$412.16	\$408.70	\$390.95	\$390.95	\$391.01		\$394.02	
Aug-17	54,843	\$354.99	\$411.96	\$408.51	\$412.81	\$409.34	\$373.59	\$373.59	\$374.07		\$415.04	
Sep-17	54,384	\$392.58	\$412.62	\$409.14	\$413.47	\$409.97	\$435.06	\$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	\$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	\$427.25	\$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	\$427.97	\$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	\$437.83	\$437.65	\$416.46	\$407.49	
Jan-18	52,507	\$434.66	\$415.01	\$411.07	\$415.90	\$411.99	\$408.25	\$408.25	\$408.11	\$431.73	\$406.13	
Feb-18	52,433	\$431.74	\$415.74	\$411.77	\$416.62	\$412.68	\$376.29	\$376.29	\$376.37	\$432.93	\$406.21	
Mar-18	52,332	\$390.58	\$416.40	\$412.47	\$417.27	\$413.38	\$386.82	\$386.82	\$387.33	\$432.42	\$408.15	
Apr-18	52,560	\$430.08	\$417.13	\$413.17	\$417.99	\$414.08	\$393.44	\$393.44	\$394.12	\$415.05	\$409.53	
May-18	52,733	\$408.61	\$417.85	\$413.89	\$418.69	\$414.78	\$407.93	\$407.93	\$408.90	\$421.25	\$411.71	
Jun-18	52,720	\$396.32	\$418.58	\$414.60	\$419.41	\$415.49	\$396.34	\$396.34	\$397.72	\$415.98	\$413.20	
Jul-18	53,446	\$396.55	\$419.29	\$415.32	\$420.11	\$416.21	\$450.41	\$450.41	\$451.03	\$407.79	\$414.31	
Aug-18	53,468	\$388.75	\$420.03	\$416.05	\$420.83	\$416.92	\$361.68	\$361.68	\$363.60	\$403.09	\$413.37	
Sep-18	53,278	\$449.57	\$420.77	\$416.78	\$421.55	\$417.64	\$401.52	\$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				\$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

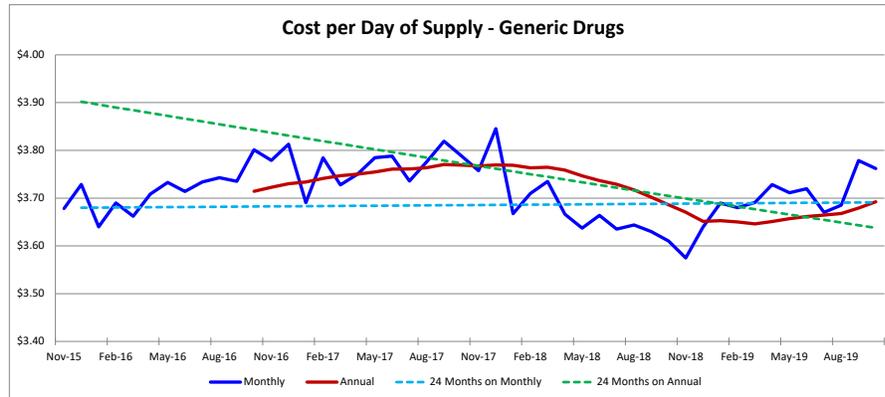
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PHARMACY TREND DEVELOPMENT FOR ESI CLAIMS

GENERIC DRUGS - COST TREND

Incurred Date	MONTHLY DATA				ROLLING 12			EXPONENTIAL FIT	
	Supply	AWP Cost	Cost/ Supply	Monthly Cost Trend	Supply	Adjusted Allowed Charge	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

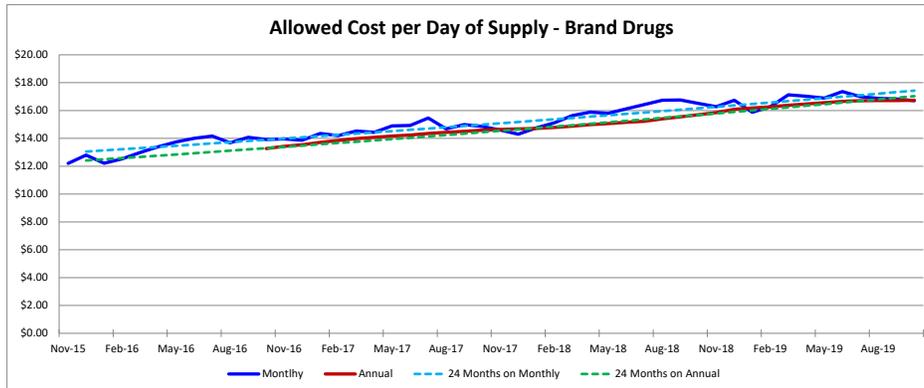
24 Months on Annual	
1.000	32.513
0.000	0.278
0.736	0.007
61.181	22.000

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

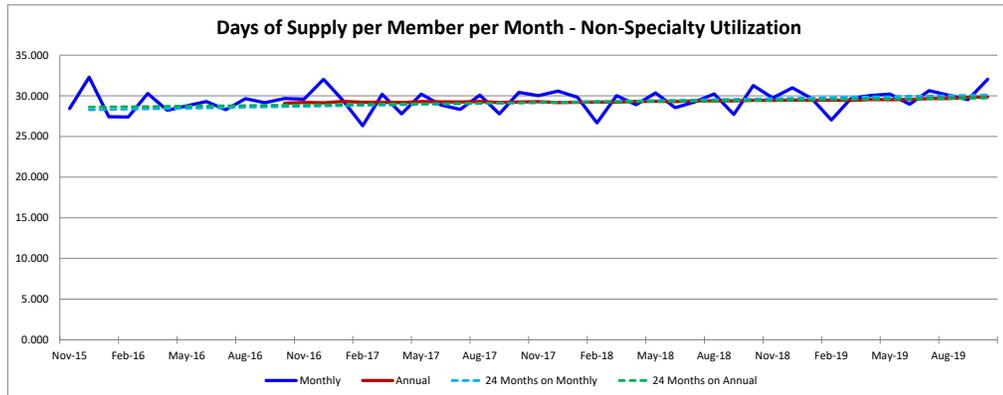
24 Months on Annual	
1.000	0.001
0.000	0.325
0.976	0.008
912.288	22.000

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%



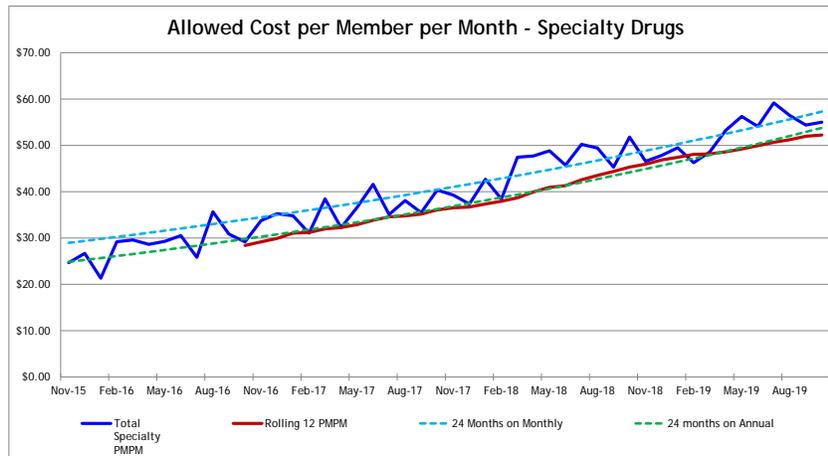
Regressions	24 Months on Monthly	24 Months on Annual
	1.000	4.248
	0.000	1.789
	0.051	0.042
	1.180	22.000
	1.000	9.146
	0.000	0.087
	0.891	0.002
	180.417	22.000

PHARMACY TREND DEVELOPMENT - SPECIALTY TREND CALCULATION

Incurred Date	MONTHLY DATA			ROLLING 12			EXPONENTIAL FIT	
	Members	Contract Adjusted Allowed Charges	Total Specialty PMPM	Members	Contract Adjusted Allowed Charges	Rolling 12 PMPM	Monthly Data	Rolling 12 Data
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