



Impact of COVID-19 on ACA Markets

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This paper - originally released in October 2020 - was updated in February 2021 to compare 2019 and 2020 WNRAR data through October (previously July). Additionally, a table was added to compare the percentage of members with at least one HCC between metal tiers (Table 6).

In this paper, we provide our observations on the impact of COVID-19 on ACA markets by summarizing data collected through October of each benefit year in the 2019 and 2020 Wakely National Risk Adjustment Reporting (WNRAR) project. The WNRAR project collects summary level risk adjustment data from over 70 health insurance issuers across over 30 states and provides participants with detailed reports several times throughout the calendar year.

Actual data and results may vary materially from our estimates for many reasons. Please see the Disclosures and Limitations section of this paper for additional details.

Executive Summary

We examined the following data metrics to analyze the impacts of the COVID-19 pandemic:

- Changes in ACA enrollment for individual and small group markets
- Changes in the proportion of members with at least one claim during the benefit year (claimant ratios)
- Changes in ACA risk scores
- Hierarchical condition categories (HCCs)¹ profiles for members who are diagnosed with COVID-19
- Any regional differences in 2020 results, including COVID-19 prevalence and impacts

¹ HCCs are conditions that are listed in the ACA risk adjustment model that would be risk adjusted. These conditions are typically chronic or have high claims cost.

The WNRAR data revealed the following:

- Total member months for the individual market increased in 2020 while total member months in small group market decreased slightly when compared to 2019². This observation suggests that members in other markets (including small group market) may have switched to the individual market for health insurance.
- Medical and pharmacy claimant ratios decreased between 1% to 2% in 2020 when compared to 2019 for both individual and small group markets.
- The proportion of members with at least one medical HCC coded decreased in 2020 by approximately 0.5%. However, the proportion of members with at least one prescription drug imputed HCC (RXC) increased slightly in 2020 by 0.4%.
- The medical HCC risk scores stayed relatively the same³ from 2019 to 2020 but RXCs risk scores in 2020 increased when compared to 2019⁴. The increase in RXC risk scores were mainly driven by higher prevalence rates in Anti-HIV Agents (RXC01)⁵ and Immune Suppressant and Immunomodulators (RXC09).
- We compared 2020 members in three separate buckets which include members without a COVID-19 diagnosis, members with non-severe COVID-19, and members with severe COVID-19⁶. We found that there are significant comorbidities for members with non-severe COVID-19 and severe COVID-19. It is undetermined if these comorbidities are diagnosed before or after their COVID-19 diagnoses. The list of top 10 HCC comorbidities are shown in Table 4 below.
- We also observed variations in regional averages for our data metrics, particularly on claimant ratios and COVID-19 prevalence rates. For example, the Northeast region had higher claimant ratios and COVID-19 prevalence rate than the West region. Some of these differences may be due to the timing of our data collection and the availability of data for each States within each Region.

In the sections below, we include details of our data and methodology, a discussion of our results and observations, and limitations and caveats of our analysis. We have also included a section to discuss key considerations for health plans based on our observations.

We plan on releasing additional updates to this paper in the future as more data becomes available.

² In recent years prior to 2020, the individual market enrollment had not increased year over year.

³ Medical risk scores increased slightly for individual markets and decreased slightly for small group markets.

⁴ We rescored the 2019 and 2020 data with a consistent set of risk coefficient to compare risk scores across both years.

⁵ Please note that RXC01 mapping was updated recently by CMS. The updated mapping is not reflected in our data for this paper. The mapping would decrease the prevalence rates of RXC01.

⁶ We assumed members with COVID-19 diagnosis codes and HCC002 to be severe cases of COVID-19.

Data and Methodology

Through the WNRAR project, we collected high level summary data from over 70 issuers across over 30 states. The data summaries used in this analysis are based on enrollment data through October 31st of each year, and medical and pharmacy data incurred and paid through October 31st of each year. We did not include any adjustment for incurred but not reported (IBNR) claims or any other completion estimates in our analysis.

The regions (West, Midwest, Northeast, and South) shown in this report are based on classifications provided by the US Census Bureau⁷. We did not make any adjustment to complete for states that are missing in our data by region. Our data did not cover every state in each region.

In this analysis, we identified COVID-19 members by identifying members with any risk adjustment allowable claim⁸ having diagnosis codes of B9729 or U071.⁹ Due to the stringent nature of ACA risk adjustment allowable filter, it is likely that our analysis includes only a smaller subset of members with COVID-19 diagnoses. In addition, we have defined members who are diagnosed with COVID-19 and also have Septicemia, Sepsis, and Systemic Inflammatory Response Syndrome/Shock (HCC002) as severe COVID-19.

In order to compare HCC risk scores consistently between 2019 and 2020, we rescored the prevalence rates for each HCCs using the 2020 Silver plan risk coefficients. This allows us to compare the risk score components based on conditions coded and not subject to differences in risk coefficients by risk score model versions and plan selection. We did not adjust our risk scores for any demographic differences in the underlying data between 2019 and 2020 or included any completion estimates.

Results and Observations

In this section, we summarize our comparison of 2019 and 2020 data summaries as well as include a discussion of our observations.

Overall Changes from 2019 to 2020

Table 1 below shows the comparison of key data metrics for the individual and small group markets in 2019 and 2020, using the first ten months of data available for each year. As shown below, the enrollment in the individual market has increased by approximately 6.2% from 2019 while the enrollment in the small group market has decreased by approximately 3.2%. Even though enrollment changes in individual and small group markets are in opposite directions, we observed that medical and pharmacy claimant ratios decreased for both markets from 2019 to 2020. Medical HCCs are mapped based on diagnosis codes within medical claims while RXCs are mainly mapped based on NDC codes in pharmacy data. As expected, we see that the percentage of members with at least one HCC has dropped in 2020 which is consistent with the decrease in medical claimant ratio. However, we note that

⁷ https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf

⁸ A claim is deemed risk adjustment allowable under the ACA risk adjustment model if they originated from an inpatient facility, or if the claim originated from selected outpatient facility or professional claim with eligible procedure codes.

⁹ ICD-10 code U071 is assigned specifically for diagnosis of COVID-19. B9729 is used to capture any potential COVID-19 cases prior to the introduction of U071.

the percentage of members with at least one RXC has increased in 2020, even though the pharmacy claimant ratio has decreased.

Table 1: Comparison of 2019 and 2020 Market Landscape

	Oct 2019 WNRAR	Oct 2020 WNRAR	Change
Individual Market			
Member Months	107.2 M	113.8 M	+6.6 M
Medical Claimant Ratio	70.3%	68.2%	-2.0%
Pharmacy Claimant Ratio	61.8%	60.3%	-1.6%
% Members with >1 HCC	22.1%	21.5%	-0.6%
% Members with >1 RXC	6.2%	6.6%	+0.4%
Small Group Market			
Member Months	87.8 M	85.0 M	-2.8 M
Medical Claimant Ratio	72.5%	71.5%	-1.0%
Pharmacy Claimant Ratio	61.2%	59.4%	-1.8%
% Members with >1 HCC	18.8%	18.3%	-0.5%
% Members with >1 RXC	4.4%	4.9%	+0.5%

Given that the percentage of members with RXCs were consistently higher in 2020 for both markets, we computed the risk scores of medical and pharmacy condition risk scores consistently using 2020 silver plan risk coefficients to investigate the drivers. In Table 2 below, we compare the medical and pharmacy risk scores between our 2019 and 2020 results. In addition, we have shown a few condition categories to provide additional insights.

Table 2: Comparison of 2019 and 2020 Risk Scores and Selected Conditions

	Oct 2019 WNRAR	Oct 2020 WNRAR	Change
Individual Market			
Average Medical Risk Scores	0.721	0.723	+0.002
Average Pharmacy Risk Scores	0.194	0.217	+0.023
Chronic HCC Prevalence ¹⁰	15.68%	15.36%	-0.32%
Mental Health HCC Prevalence ¹¹	2.58%	2.64%	+0.06%
Anti-HIV Agents (RXC01) Prevalence	0.56%	0.65%	+0.09%
HIV/AIDS (HCC001) Prevalence	0.49%	0.50%	+0.01%
Immune Suppressants (RXC09) Prevalence ¹²	0.92%	1.10%	+0.18%
RXC09-related HCC Prevalence ¹³	1.81%	1.78%	-0.03%

¹⁰ Chronic HCCs are based on the sum of prevalence rates for HCC001, HCC006, HCC008, HCC009, HCC010, HCC011, HCC012, HCC013, HCC056, G01, and G15 from the HHS HCC risk adjustment model.

¹¹ Mental Health HCCs are based on the sum of prevalence rates for HCC081, HCC082, HCC087, HCC88, HCC089, HCC090, HCC094 and G09.

¹² RXC09 includes Immune Suppressants and Immunomodulators prescription drugs.

¹³ We used RXC09 interaction HCCs to determine the related conditions. These include HCC041, HCC048, HCC056, and HCC057.

	Oct 2019 WNRAR	Oct 2020 WNRAR	Change
Small Group Market			
Average Medical Risk Scores	0.541	0.537	-0.004
Average Pharmacy Risk Scores	0.160	0.198	+0.038
Chronic HCC Prevalence	11.78%	11.45%	-0.33%
Mental Health HCC Prevalence	1.78%	1.80%	+0.02%
Anti-HIV Agents (RXC01) Prevalence	0.19%	0.24%	+0.05%
HIV/AIDS (HCC001) Prevalence	0.16%	0.15%	-0.01%
Immune Suppressants (RXC09) Prevalence	0.91%	1.23%	+0.32%
RXC09-related HCC Prevalence	1.60%	1.60%	0.00%

We categorized a few HCCs to estimate the prevalence rates of chronic HCCs and mental health HCCs across 2019 and 2020. The associated HCCs for both categories can be found in the footnotes. We observed that chronic HCCs prevalence rate decreased slightly while mental health HCCs prevalence rate increased slightly. Given that the percentage of members with at least one HCC has decreased in 2020, it is expected that the prevalence rate for chronic HCCs also decreased slightly. However, it is interesting that mental health HCC prevalence rate has increased slightly even though overall medical claimant ratio has decreased. Since mental health HCC classification may be stringent based on the risk adjustment model, it is possible that the increase in mental health related claims would be relatively higher¹⁴. We do not have the data to investigate this observation further.

We also observed that pharmacy risk scores increased in 2020 when compared to 2019. This is consistent with our observation that the proportion of members with at least one RXC increased in 2020. Upon further investigation, we note that the prevalence rates for Anti-HIV Agents (RXC01) and Immune Suppressants and Immunomodulators (RXC09) both increased significantly from 2019, driving the increase in pharmacy risk scores in 2020¹⁵. Given the increase in these RXCs, we are also showing their related medical claim HCCs prevalence rates to paint a complete picture. While RXC01 and RXC09 prevalence rates have increased, their related medical claim HCCs prevalence rates have remained relatively the same when compared to 2019. In other words, while the percentage of members being coded with these conditions through medical claims remained relatively unchanged, the percentage of members being prescribed these specific drug classes have increased. Given that our data is summarized and does not include specific drugs prescribed to members, we were unable to determine if there are any specific drugs (or NDCs) that are causing the increase in RXC01 and RXC09. Therefore, it remains undetermined if these increases in RXC prevalence rates are due to the differences in 2019 and 2020 mapping of NDC to RXC. It is possible that there may be changes in drug prescriptions practice or patient’s drug adherence as a result of the COVID-19 pandemic.

¹⁴ Note that very few ICD-10 mental health codes are mapped to an associated HCC. Therefore, mental health HCCs are only a subset of all mental health claims.

¹⁵ Both RXC01 and RXC09 have relatively high risk coefficients in the ACA model. Risk coefficients are used in risk adjustment models to estimate liability of associated RXCs and HCCs.

COVID-19 Prevalence and Related Observations

As described in our “Data and Methodology” section, we were also able to collect data for members who are categorized as non-severe COVID-19 and severe COVID-19 through our project. The observations found in this section are specific to our most recent 2020 results only.

Table 3: COVID-19 Prevalence Rates and Relative Risk

	Individual	Small Group
Non-severe COVID-19 Prevalence	1.20%	1.15%
Severe COVID-19 Prevalence	0.07%	0.04%
COVID-19 Members with at least 1 HCC	41.1%	30.8%
Average non-COVID-19 relative risk ¹⁶	1.000	1.000
Average non-severe COVID-19 relative risk	2.074	1.811
Average severe COVID-19 relative risk	23.860	25.497

In Table 3 above, we show the prevalence rates of members who are categorized as non-severe and severe COVID-19 from our data. While there isn’t a significant difference in the prevalence rate of COVID-19 members between individual and small group markets, we note that the percentage of COVID-19 members with at least one HCC is higher in the individual market. It is important to note that COVID-19 is not currently a risk adjusted condition in the ACA risk adjustment model. This observation suggests that there may be significant differences in coding of COVID-19 members, as well as their underlying morbidity. Additionally, the relative risks shown in Table 3 are for illustration purpose only. The relative risk differences for non-COVID-19, non-severe COVID-19 and severe COVID-19 members show that COVID-19 members can be costly and may vary significantly, especially if they are considered severe COVID-19 members.

Note that our definition of COVID-19 members may be more stringent than other publicly available sources because we only categorize COVID-19 members by using COVID-19 diagnosis codes in risk adjustment allowable claims. Therefore, our prevalence rates may be slightly lower than if we had included all members who have received a COVID-19/coronavirus diagnosis code without the risk adjustment allowable filter. Our covered population of individual and small group markets are also likely younger and healthier than the national averages shown in other public sources. We have included both claimants and non-claimants for the non-COVID-19 population while COVID-19 members would by definition have had at least one claim for us to document their conditions.

Our data also contains the various conditions (HCCs) that are categorized based on the ACA risk adjustment model. To understand COVID-19 members further, we cross-referenced the members who are labeled as non-COVID-19, non-severe COVID-19, and severe COVID-19 to other conditions found in the model. Table 4 below shows the top 10 comorbidities that were found in our data for members with severe COVID-19. We were unable to determine if these comorbidities happened before or after a member was diagnosed with COVID-19.

¹⁶ Relative risk is calculated based on members’ plan liability risk scores (PLRS), actuarial value (AV), and demographic component of PLRS when compared to non-COVID-19 members. As a result, non-COVID-19 members have 1.0 risk scores.

Table 4: Selected Comorbidities for COVID-19 Members

	Non- COVID-19	Non-severe COVID-19	Severe COVID-19
Individual Market			
Respiratory Arrest	0.31%	5.46%	59.85%
Diabetes	6.75%	14.91%	46.56%
Asthma and Chronic Obstructive Pulmonary Disease	4.82%	10.00%	22.21%
Congestive Heart Failure	0.96%	2.25%	18.91%
Insulin (RXC)	1.70%	3.75%	15.97%
Specified Heart Arrhythmias	1.16%	2.01%	14.27%
Respirator Dependence	0.05%	0.17%	12.34%
Protein-Caloric Malnutrition	0.18%	0.39%	12.63%
Lung Infections	0.09%	0.35%	11.93%
Coagulation Defects and Other Specified Hematological Disorders	0.48%	1.21%	12.92%
Small Group Market			
Respiratory Arrest	0.18%	3.21%	60.51%
Diabetes	4.14%	8.31%	37.99%
Asthma	4.46%	8.26%	21.19%
Specified Heart Arrhythmias	0.95%	1.71%	14.31%
Coagulation Defects and Other Specified Hematological Disorders	0.41%	0.96%	14.12%
Congestive Heart Failure	0.60%	1.31%	15.21%
Protein-Caloric Malnutrition	0.11%	0.25%	12.59%
Lung Infections	0.06%	0.25%	11.71%
Insulin (RXC)	1.17%	2.09%	13.07%
Respirator Dependence	0.03%	0.09%	10.55%

Regional Differences

We also reviewed several of our key data metrics by region to identify if there are any significant variations in our results. A summary of key metrics by region can be found in Table 5 below.

Table 5: 202010 WNRAR Key Data Metrics by Region

	West	Midwest	South	Northeast
Individual Market				
Member Months	30.2 M	12.1 M	52.3 M	19.2 M
Medical Claimant Ratio	63.7%	69.2%	69.1%	72.6%
Pharmacy Claimant Ratio	55.6%	62.0%	61.4%	63.7%
% Members with >1 HCC	19.0%	22.0%	23.2%	20.6%
% Members with >1 RXC	5.2%	7.2%	7.5%	5.6%
Average Medical Risk Scores	0.593	0.795	0.807	0.651
Average Pharmacy Risk Scores	0.177	0.245	0.233	0.221
COVID-19 Prevalence Rate	0.78%	0.74%	1.71%	1.18%
COVID-19 Members with at least 1 HCC	39.0%	42.5%	42.4%	37.6%
Small Group Market				

	West	Midwest	South	Northeast
Member Months	29.8 M	11.5 M	25.6 M	18.1 M
Medical Claimant Ratio	65.3%	73.6%	74.3%	76.1%
Pharmacy Claimant Ratio	53.2%	60.3%	63.2%	63.3%
% Members with >1 HCC	16.8%	18.5%	19.2%	19.5%
% Members with >1 RXC	3.9%	5.1%	5.6%	5.3%
Average Medical Risk Scores	0.459	0.556	0.574	0.600
Average Pharmacy Risk Scores	0.152	0.199	0.226	0.235
COVID-19 Prevalence Rate	0.92%	0.95%	1.34%	1.57%
COVID-19 Members with at least 1 HCC	29.2%	30.8%	30.7%	32.6%

As shown above, there are significant variations in claimant ratios, average risk scores, and COVID-19 prevalence rates by region. Regions that are showing lower medical claimant ratios are also showing lower percentages of members with at least one HCC or RXC. It is also an interesting observation that while the Midwest region has comparable claimant ratios to the South and Northeast's claimant ratios, the COVID-19 prevalence rate in the Midwest region is significantly lower.

We did not perform any additional analysis to determine the drivers of these variation. Factors that could impact the results shown above likely include but are not limited to: differences in the timing of COVID-19 outbreak, underlying morbidity and demographic, state/regional policy and guidance during pandemic, and other regional differences. In addition, due to the timing of our data collection, some of our data metrics may be lagging as our results are not completed to end of the year.

Metal Tier Differences

We also reviewed the year-over-year changes of key data metrics by metal tier. Table 6 below shows the percentage of members with at least one HCC by market and metal tier between 2019 and 2020 data through October.

Table 6: Percentage of Members with an HCC by Metal Tier

	Bronze	Silver	Gold	Platinum	Market Total
Individual Market					
Oct 2020 WNRAR Membership Distribution	30%	57%	11%	2%	100%
October 2019 Members with at least 1 HCC	14.7%	24.2%	28.5%	36.5%	22.0%
October 2020 Members with at least 1 HCC	14.6%	23.9%	27.6%	36.8%	21.7%
Change	-0.1%	-0.4%	-0.9%	0.3%	-0.4%
Small Group Market					
Oct 2020 WNRAR Membership Distribution	10.5%	32.7%	40.5%	16.3%	100%
October 2019 Members with at least 1 HCC	14.1%	17.3%	20.0%	22.3%	18.9%
October 2020 Members with at least 1 HCC	13.9%	16.7%	19.5%	21.5%	18.3%
Change	-0.2%	-0.5%	-0.5%	-0.8%	-0.5%

As shown above, the percentage of members with at least one HCC decrease for all market and metal combinations except for the Platinum individual cohort. Even for all other metals, the impact of

decrease in members with at least 1 HCC varies from one metal plan to another. We did not perform any additional analysis to determine the drivers of these variation.

Key Considerations

Based on our results and observations above, we are including a few key considerations for issuers' risk adjustment operations. These considerations include but are not limited to:

- As shown in the summaries above, medical and pharmacy claimant ratios as well as the percentage of members who have at least one HCC coded have decreased significantly in 2020. As a result, all efforts to make sure chronic members are receiving continuity of care and having risk adjustment allowable claims in 2020 will likely have a significant impact on issuer's risk revenue.
- Based on our results, we are also seeing a significant variation in the percentage of COVID-19 members with at least one HCC by region as well as their associated comorbidities. Because COVID-19 isn't a risk adjusted condition under the ACA risk adjustment model, issuers should check to make sure all appropriate, related HCCs are coded for their COVID-19 members.
- Our preliminary results show that there is a significant increase in individual market enrollment in 2020 while small group market enrollment has decreased. Issuers should consider if these enrollment patterns will continue into 2021 and how to capture conditions for the new members entering the individual market.
- Given the instability and emerging data in 2020, it is prudent for issuers to follow developing trends as linear completion based on pre-COVID-19 experiences may be inaccurate. We plan on reviewing any emerging trend as more data becomes available.

Disclosures and Limitations

This paper relies on data collected from WNRAR participants in their 201910 and 202010 results which include data with claims incurred and paid from January 2019 through October 2019 and January 2020 through October 2020 respectively. The issuers who were included in our 2019 results are also included in our 2020 results. We have not examined if issuers' enrollment has changed significantly. Wakely did not make any adjustments or changes to the collected data. Consequently, claims, especially more severe inpatient claims, may be truncated or disproportionately excluded from this dataset. The changes in COVID-19 testing availability and vaccination after our data window could have material impacts on the data in terms of identifying COVID-19 patients and determining their average risk.

The observations in this analysis are rolled up at the region and national level based on available data. As a result, there may be significant variation in specific market and issuer results, and the results here may not be appropriate for any specific issuer.

We categorized COVID-19 members using only claims that are allowable for CMS' risk adjustment model. This may reduce the number of members categorized as COVID members. In addition, our definition of

severe and non-severe COVID-19 members may not be consistent with other publicly available methods or data.

The results above are inherently uncertain and rely upon data provided by WNRAR participants. We extensively review the data and work with issuers to correct any observed issues, but cannot completely guarantee the accuracy of any single issuer's data submission.

Users of this analysis should be qualified to use it and understand the results and its inherent uncertainty. We advise all participants to discuss the analysis and appropriateness of application with Wakely before using these estimates.

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Please contact Matt Sauter or Chia Yi Chin at MattS@Wakely.com or ChiaC@Wakely.com with any questions or comments.

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