



2023 Population Assessment



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CareVio Overview

CareVio is an innovative care management organization with a belief that the key to providing truly great health care is to partner with our members and their families, building a system of care that is effective, affordable, and valuable to everyone who is touched by it. CareVio's interdisciplinary care coordination team is comprised of Medical Directors, nurse care managers, social workers, pharmacists, support staff, and many more who work to assist clinicians in caring for their patients. CareVio's objective is to aid the clinician in providing high quality health care, improving health outcomes, enhancing member experience, while lowering cost and optimizing resource utilization. CareVio monitors patients through multiple modalities including face to face, telephonically and secure texting. All phases of care are addressed, especially those transitions of care, that are often difficult to manage.

CareVio collaborates with clinicians in acute, post-acute, urgent, and community settings. In addition, CareVio partners with community resources to identify health equity opportunities within our service area. CareVio recognizes the value of the National Committee for Quality Assurance (NCQA) Accreditation for Health Plans and other organizations for their rigorous standards to improve the quality of care. Five of our programs including our policies and procedures are NCQA compliant and accredited, providing nationally recognized care management services to members. CareVio has established a national Registered Nurse licensure initiative to expand outreach beyond the Delaware Tri-State (Pennsylvania, Maryland, New Jersey, and Delaware) area.

CareVio's mission is to deliver caring, compassionate, quality care and engage members in their health and wellness journey. Our main service area is identified as the three counties in Delaware: New Castle, Kent, and Sussex.

Population Assessment Overview

The purpose of CareVio's Population Assessment is to evaluate member demographics, health conditions, cultural/linguistic characteristics, Social Determinants of Health, health equity opportunities, etc. to identify the needs of the population and guide future CareVio programming. CareVio used data from primary and secondary sources to support its analysis. Primary sources included payer claims and clinical systems data from electronic health platform records and health information exchanges. Secondary sources included local and federal publicly available data such as demographic and disability data from the United States Census Bureau. All measure calculations were based on standard definitions that were vetted through detailed review and guidance by the CareVio Clinical Leadership. This analysis focused on targeted populations, subpopulations, disease



management programs, and Social Determinants of Health (SDOH). The objective of this assessment is to ensure that CareVio programming, activities and resources address the medical and the psychosocial needs of the majority of the population and the relevant subpopulations.

Data Sources

CareVio Data Sources

CareVio's Population Assessment involved the collection and descriptive analyses of several primary and secondary data sources.

Primary Data Sources: The following sources of primary data were used in the analysis and development of CareVio's 2023 Population Assessment. CareVio used the most up-to-date version of each data set; however, there may be a slight variation in data reporting periods. Furthermore, additional 2023 claims data may have been received after the completion of this assessment.

A. CareVio Data Sources

(1) **CareVio Claims and Encounter Data:** Claims and encounter data for the entire member population were obtained from CareVio's internal medical and administrative databases. The data in this report represents claims and encounter data received by CareVio from service providers for dates of service between January 1st through November 30, 2023.

a) **Methodology:** Descriptive analyses of CareVio's claims and encounter data were performed.

(2) **PowerChart Data:** Data entered into PowerChart was utilized to capture data not readily available from claims. (PowerChart is a secondary data source Electronic Health Record)

(3) **Program Data:** Data entered into the CareVio Electronic Health Platform was utilized specifically for sub-population data and analysis.

(4) **Health Information Exchange (HIE) Data:** Data from surrounding areas.

Delaware Population 2023

In 2023, the CareVio population continued to expand outside of Delaware borders. However, the majority of the population does reside in Delaware, similar to the population described in the 2022 Population Assessment.

- 1) Delaware's median age is 41, which is minimally higher than last year. In Delaware, 51.4% of the population is female vs. 48.6% males,²³ which is slightly different from the gender gap reported last year.



- 2) Black or African American population ranked second in the state population accounting for 23.8%; while those with the racial composition of white was ranked first at 68.0%.²³
- 3) The total population of Delaware identified as 90% non-Hispanic ethnicity, while 10% identified with an ethnicity of Hispanic²³.

U.S. Census Bureau

- 1) The United States Census Bureau estimates that the approximate population of Delaware in 2023 was 1,031,890 (an increase from 2022 of 13,494 people). The census showed that New Castle County continues to be the most heavily populated area, followed by Sussex County, then Kent County for the third year in a row.

Modern Language Association (MLA) Language Map

- 1) The MLA Language map has not had an updated data set since the previous CareVio 2022 Population Health Assessment Report. Data from the Delaware Census State Data Center, US Bureau of Census and American Community Survey is displayed on 'World Population Review', which was used for comparison purposes in the body of this report (2023 World Population Review, 2024).
- 2) Comparison of the MLA Language Map with World Population Review data shows minimal differences between the data sets. English is spoken by 86% of Delaware residents; Spanish is the second most frequently spoken language within the Delaware population.

Geocoding

- 1) Claims data was analyzed utilizing a geocoding map to identify the primary residence of the CareVio population by the zip code. How zip codes may influence the health of its members is discussed later in this report.

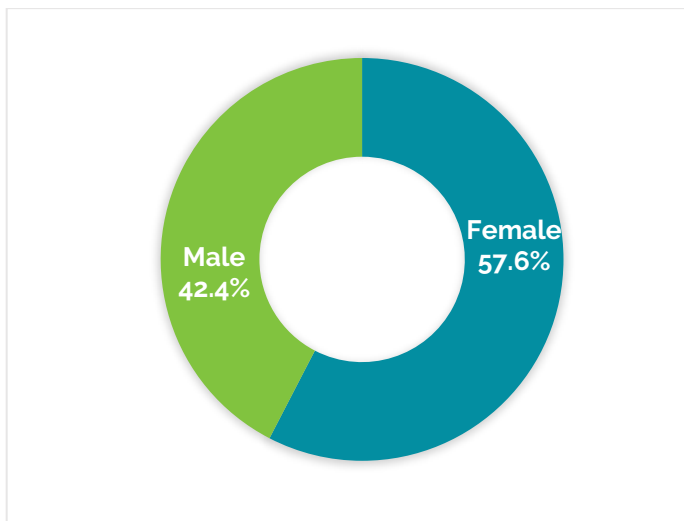


Key Findings by CareVio Population By

Gender

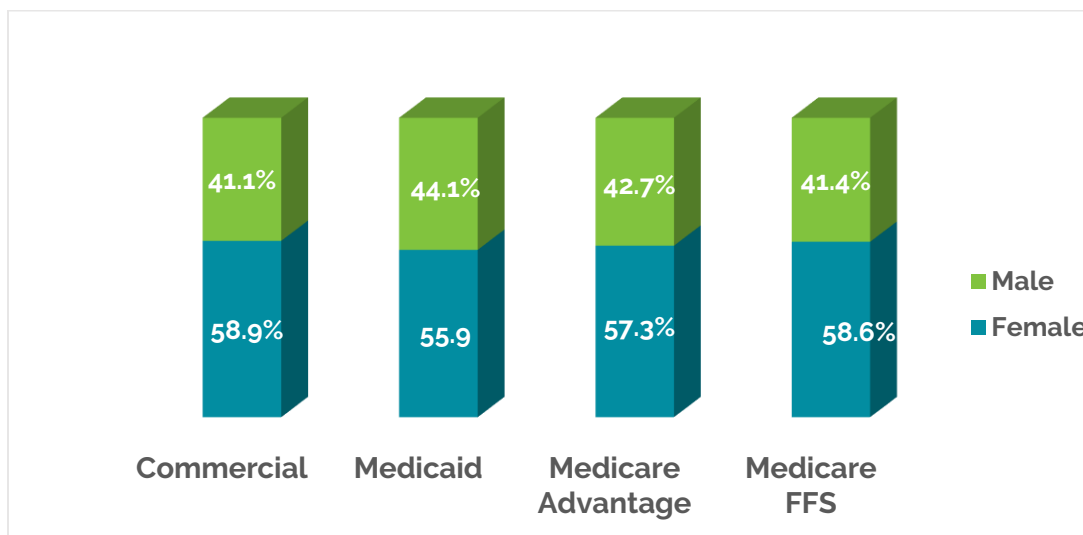
Data Source: CareVio Claims Data

Total Population



Gender	Member Count	Member %
Female	62,898	57.6%
Male	46,369	42.4%
Unknown	16	0.0%
Total	109,283	100.0%

By Line of Business



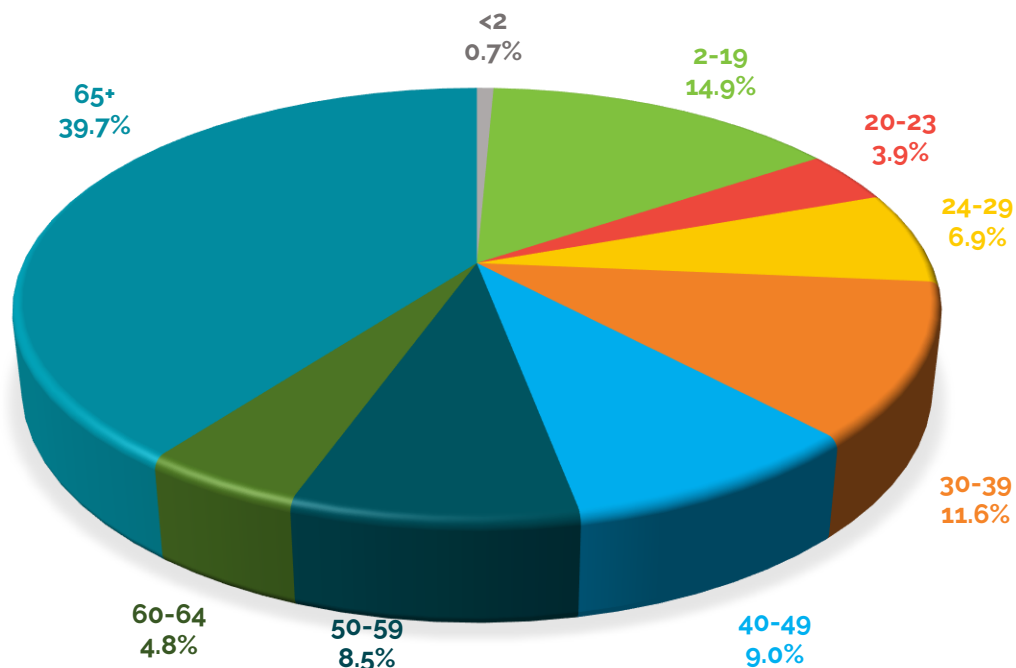
Line of Business	Female	Male
Commercial	58.9%	41.1%
Medicaid	55.9%	44.1%
Medicare Advantage	57.3%	42.7%
Medicare FFS	58.6%	41.4%



Age

Data Source: CareVio Claims Data

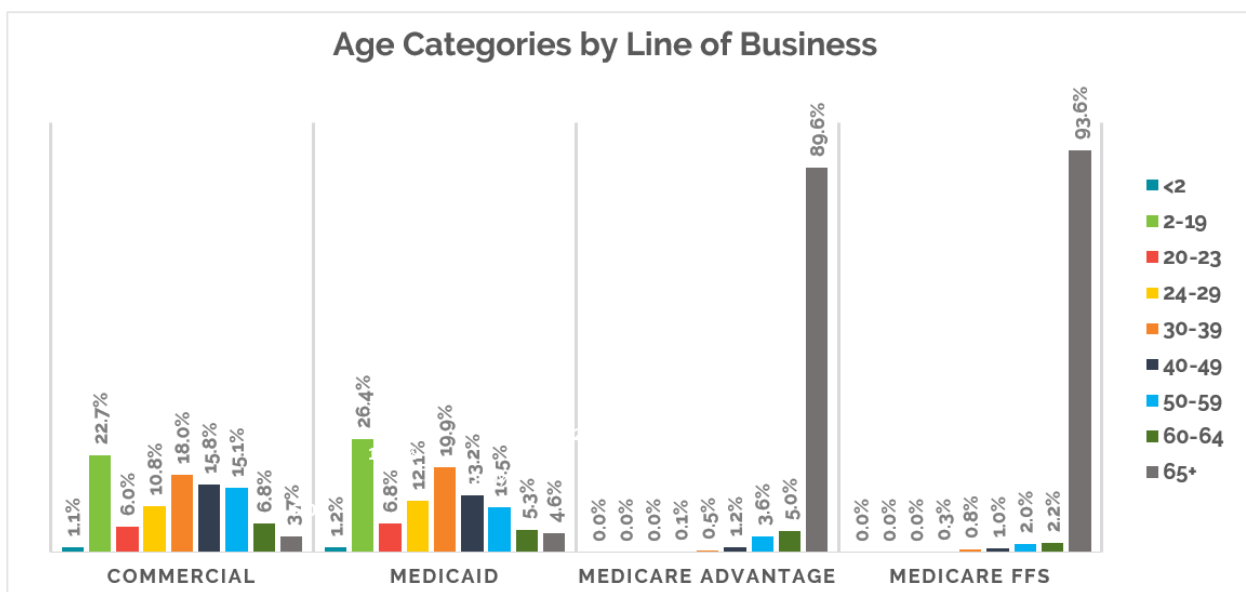
Total Population



Age Group	Member Count	Member %
<2	755	0.7%
2-19	16,252	14.9%
20-23	4,243	3.9%
24-29	7,533	6.9%
30-39	12,662	11.6%
40-49	9,858	9.0%
50-59	9,339	8.5%
60-64	5,257	4.8%
65+	43,385	39.7%
Total	109,283	100.0%



Claim Information by Age

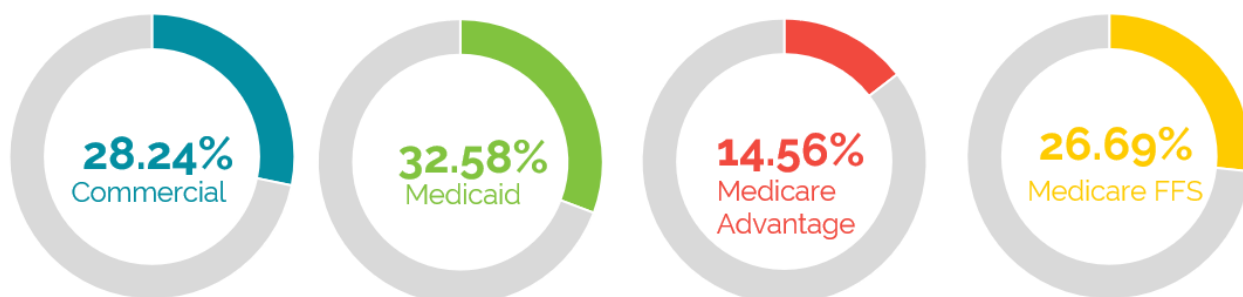


Age Group	Commercial	Medicaid	Medicare Advantage	Medicare FFS
<2	1.1%	1.2%	0.0%	0.0%
2-19	22.7%	26.4%	0.0%	0.0%
20-23	6.0%	6.8%	0.0%	0.0%
24-29	10.8%	12.1%	0.1%	0.3%
30-39	18.0%	19.9%	0.5%	0.8%
40-49	15.8%	13.2%	1.2%	1.0%
50-59	15.1%	10.5%	3.6%	2.0%
60-64	6.8%	5.3%	5.0%	2.2%
65+	3.7%	4.6%	89.6%	93.6%
Total	100.0%	100.0%	100.0%	100.0%



Line of Business (LOB)

Data Source: CareVio Claims Data

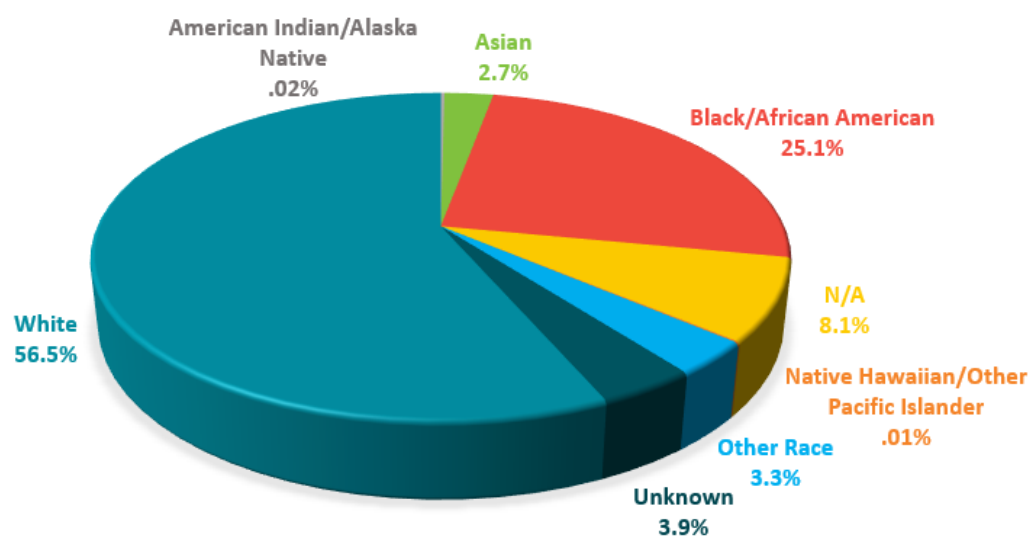


Line of Business	Member Count	Member %
Commercial	30,861	28.24%
Medicaid	35,599	32.58%
Medicare Advantage	15,912	14.56%
Medicare FFS	29,171	26.69%
Total	109,283	100%

Race

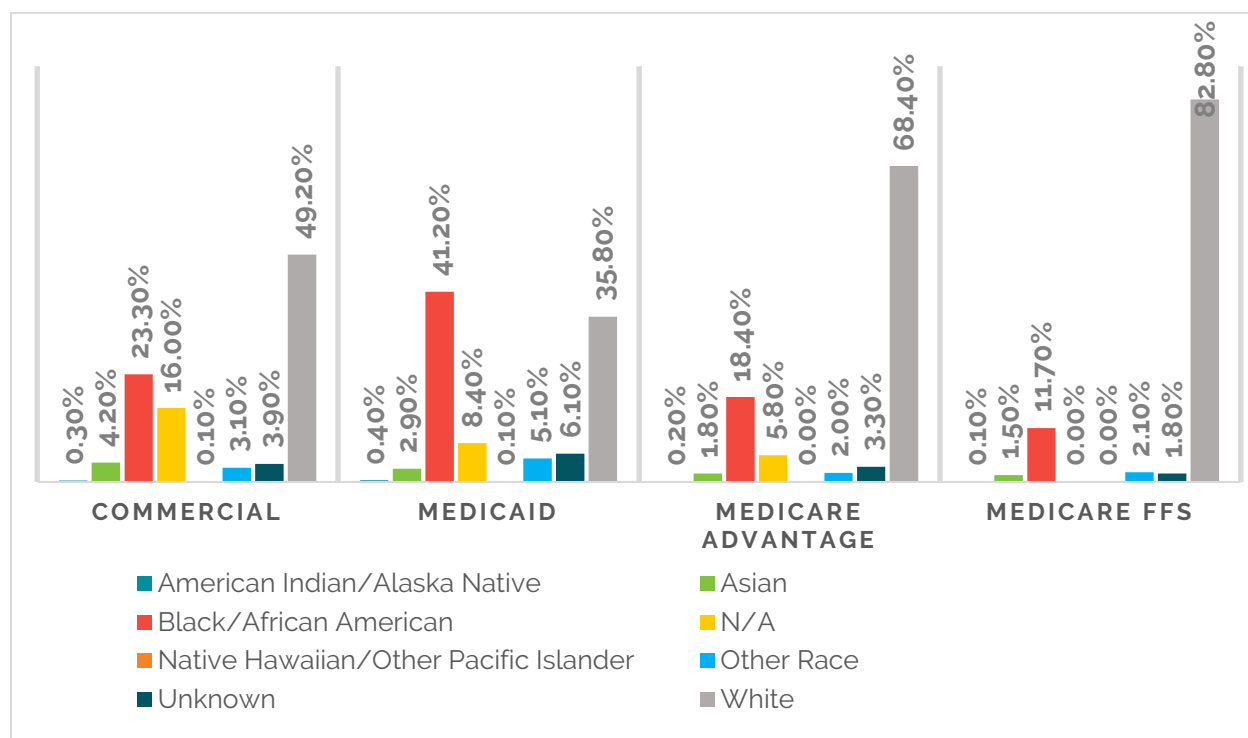
Data Source: CareVio Claims Data

Total Population



Race	Member Count	Member %
American Indian/Alaska Native	268	0.2%
Asian	2,987	2.7%
Black/African American	27,390	25.1%
N/A	8,833	8.1%
Native Hawaiian/Other Pacific Islander	79	0.1%
Other Race	3,654	3.3%
Unknown	4,315	3.9%
White	61,757	56.5%
Total	109,283	100.0%

By Line of Business



Race	Commercial	Medicaid	Medicare Advantage	Medicare FFS
American Indian/Alaska Native	0.30%	0.40%	0.20%	0.10%
Asian	4.20%	2.90%	1.80%	1.50%
Black/African American	23.30%	41.20%	18.40%	11.70%
N/A	16.00%	8.40%	5.80%	0.00%
Native Hawaiian/Other Pacific Islander	0.10%	0.10%	0.00%	0.00%
Other Race	3.10%	5.10%	2.00%	2.10%

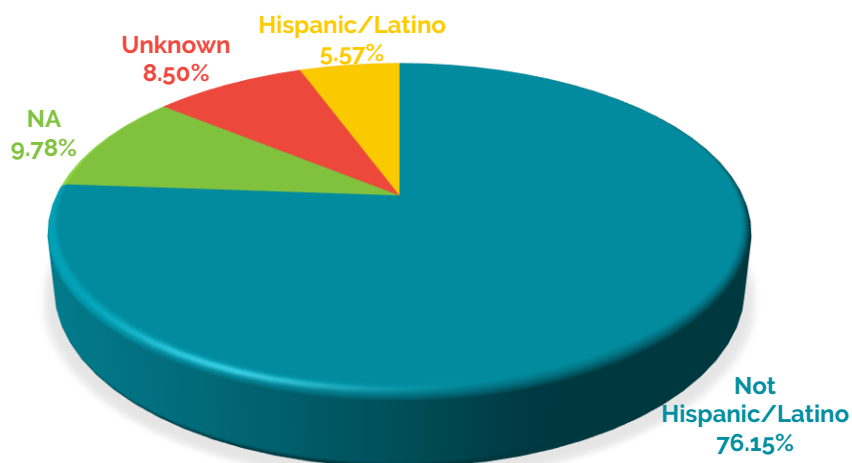


Unknown	3.90%	6.10%	3.30%	1.80%
White	49.20%	35.80%	68.40%	82.80%
Total	100.00%	100.00%	100.00%	100.00%

Ethnicity

Data Source: CareVio Claims Data

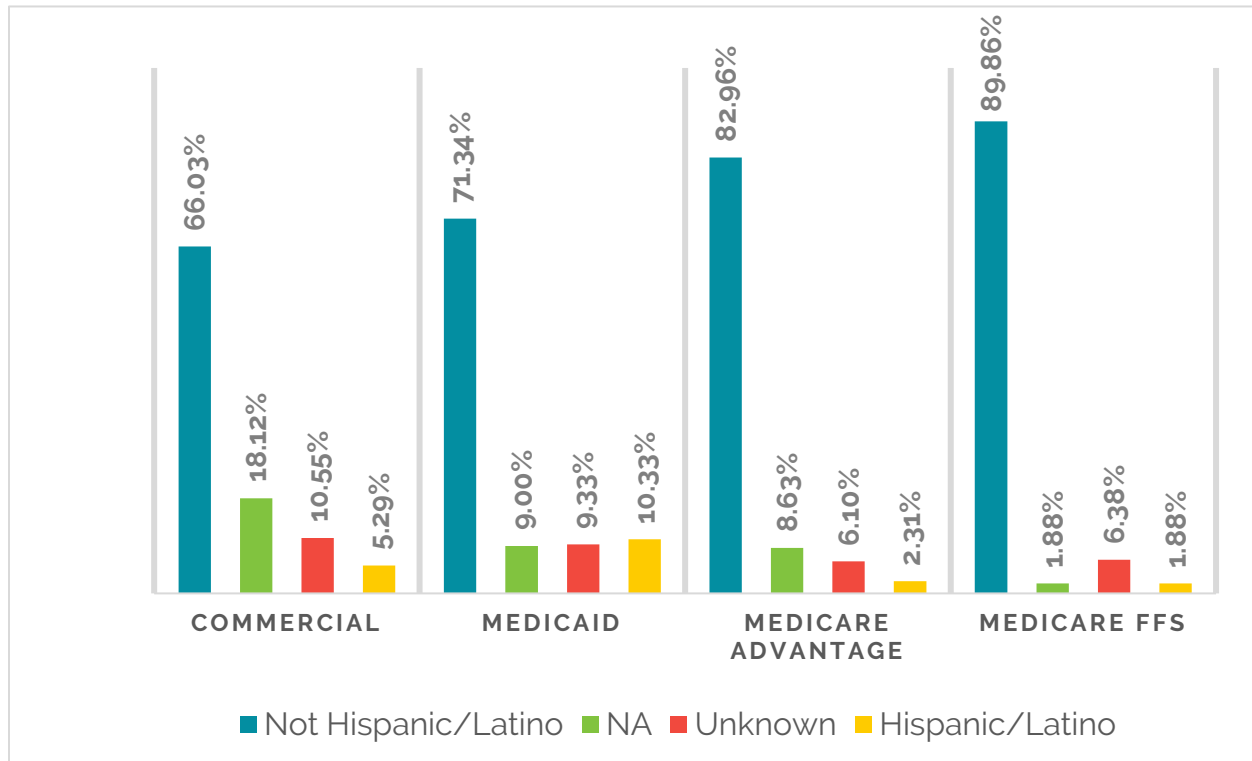
Total Population



Ethnicity	Member Count	Member %
Not Hispanic/Latino	83,215	76.15%
NA	10,691	9.78%
Unknown	9,286	8.50%
Hispanic/Latino	6,091	5.57%
Total	109,283	100.00%



By Line of Business



Ethnicity	Commercial	Medicaid	Medicare Advantage	Medicare FFS
Not Hispanic/Latino	66.03%	71.34%	82.96%	89.86%
NA	18.12%	9.0%	8.63%	1.88%
Unknown	10.55%	9.33%	6.10%	6.38%
Hispanic/Latino	5.29%	10.33 %	2.31%	1.88%
Total	100.00%	100.00%	100.00%	100.00%



Primary Language

Data Source: CareVio Claims Data

Population by Primary Language

Primary Language	Member Count	Member %
English	85,166	77.93%
Undetermined	14,095	12.90%
Other	7,785	7.12%
Spanish	1,361	1.25%
Arabic	200	0.18%
Mandarin Chinese	187	0.17%
American Sign Language	73	0.07%
Korean	69	0.06%
Vietnamese	52	0.05%
Bengali	42	0.04%
Russian	33	0.03%
Turkish	27	0.02%
French	23	0.02%
Hindi	21	0.02%
Urdu	20	0.02%
Patient Was Not Asked	19	0.02%
Cantonese	18	0.02%
Haitian Creole	17	0.02%
Gujarati	15	0.01%
Patient Unable to Answer	10	0.01%
Italian	9	0.01%
Polish	7	0.01%
Swahili	5	0.00%
Patient Refused	5	0.00%
Panjabi	5	0.00%
Portuguese	4	0.00%
Tagalog	3	0.00%
Persian	2	0.00%
Greek	2	0.00%
Tigrinya	1	0.00%
Thai	1	0.00%
Serbian	1	0.00%
Nepali (macrolanguage)	1	0.00%
Japanese	1	0.00%
French Creole	1	0.00%
Amharic	1	0.00%
Albanian	1	0.00%
Total	109,283	100.00%



Primary Language by Line of Business

Primary Language	Commercial	Medicaid	Medicare Advantage	Medicare FFS	Grand Total
English	76.8%	82.6%	73.5%	77.2%	77.9%
Undetermined	20.2%	11.7%	15.8%	4.2%	12.9%
Other	2.0%	1.4%	9.5%	17.7%	7.1%
Spanish	0.7%	2.6%	0.6%	0.5%	1.2%
Arabic	0.0%	0.5%	0.0%	0.0%	0.2%
Mandarin Chinese	0.1%	0.3%	0.1%	0.1%	0.2%
American Sign Language	0.0%	0.1%	0.1%	0.1%	0.1%
Korean	0.0%	0.1%	0.2%	0.0%	0.1%
Vietnamese	0.0%	0.1%	0.1%	0.0%	0.0%
Bengali	0.0%	0.1%	0.0%	0.0%	0.0%
Russian	0.0%	0.1%	0.0%	0.0%	0.0%
Turkish	0.0%	0.1%	0.0%	0.0%	0.0%
French	0.0%	0.0%	0.0%	0.0%	0.0%
Hindi	0.0%	0.0%	0.0%	0.0%	0.0%
Urdu	0.0%	0.0%	0.0%	0.0%	0.0%
Patient Was Not Asked	0.0%	0.0%	0.0%	0.0%	0.0%
Cantonese	0.0%	0.0%	0.0%	0.0%	0.0%
Haitian Creole	0.0%	0.0%	0.0%	0.0%	0.0%
Gujarati	0.0%	0.0%	0.0%	0.0%	0.0%
Patient Unable to Answer	0.0%	0.0%	0.0%	0.0%	0.0%
Italian	0.0%	0.0%	0.0%	0.0%	0.0%
Polish	0.0%	0.0%	0.0%	0.0%	0.0%
Swahili	0.0%	0.0%	0.0%	0.0%	0.0%
Patient Refused	0.0%	0.0%	0.0%	0.0%	0.0%
Panjabi	0.0%	0.0%	0.0%	0.0%	0.0%
Portuguese	0.0%	0.0%	0.0%	0.0%	0.0%
Tagalog	0.0%	0.0%	0.0%	0.0%	0.0%
Persian	0.0%	0.0%	0.0%	0.0%	0.0%
Greek	0.0%	0.0%	0.0%	0.0%	0.0%
Tigrinya	0.0%	0.0%	0.0%	0.0%	0.0%
Thai	0.0%	0.0%	0.0%	0.0%	0.0%
Serbian	0.0%	0.0%	0.0%	0.0%	0.0%
Nepali (macrolanguage)	0.0%	0.0%	0.0%	0.0%	0.0%
Japanese	0.0%	0.0%	0.0%	0.0%	0.0%
French Creole	0.0%	0.0%	0.0%	0.0%	0.0%
Amharic	0.0%	0.0%	0.0%	0.0%	0.0%
Albanian	0.0%	0.0%	0.0%	0.0%	0.0%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%



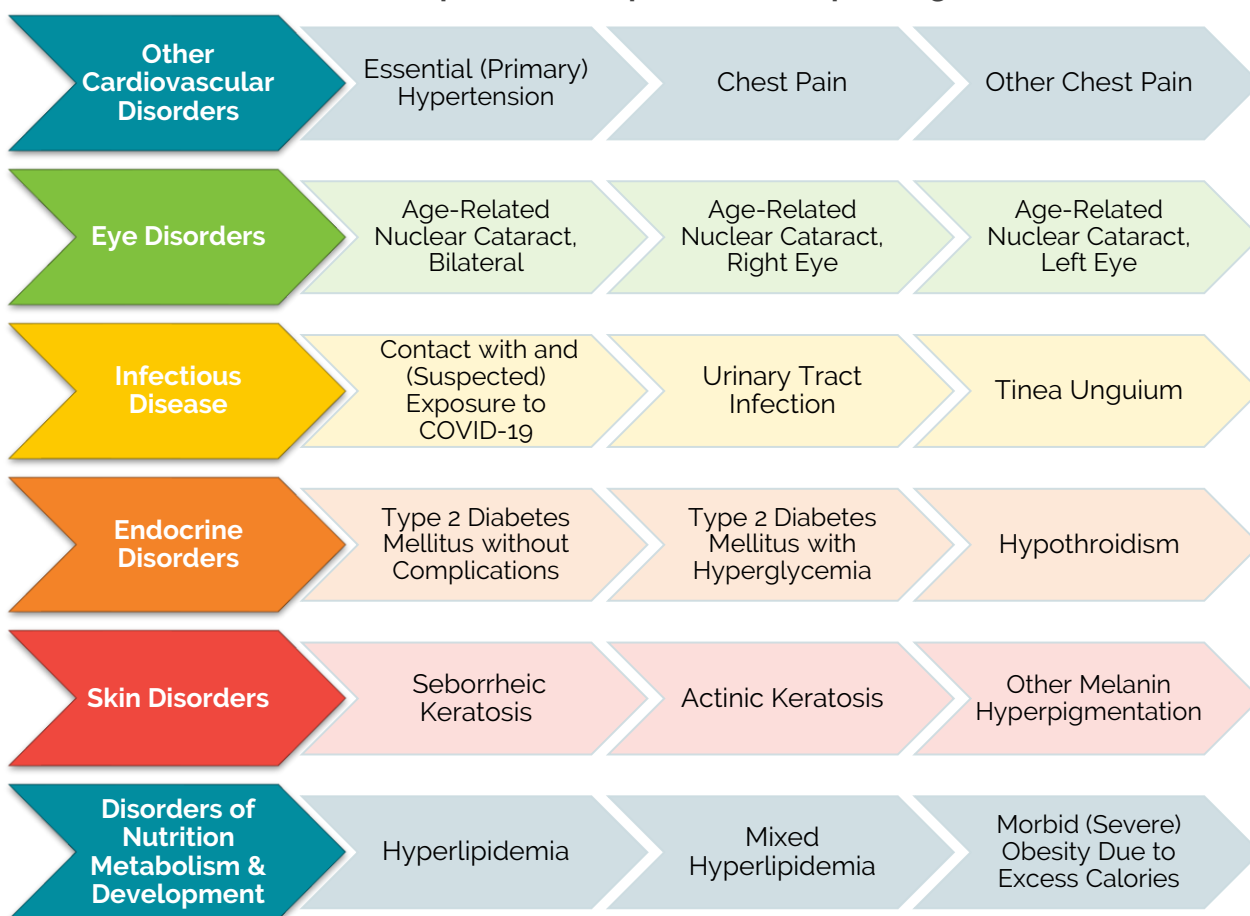
Top 20 Physical Health Conditions

Data Source: CareVio Claims Data

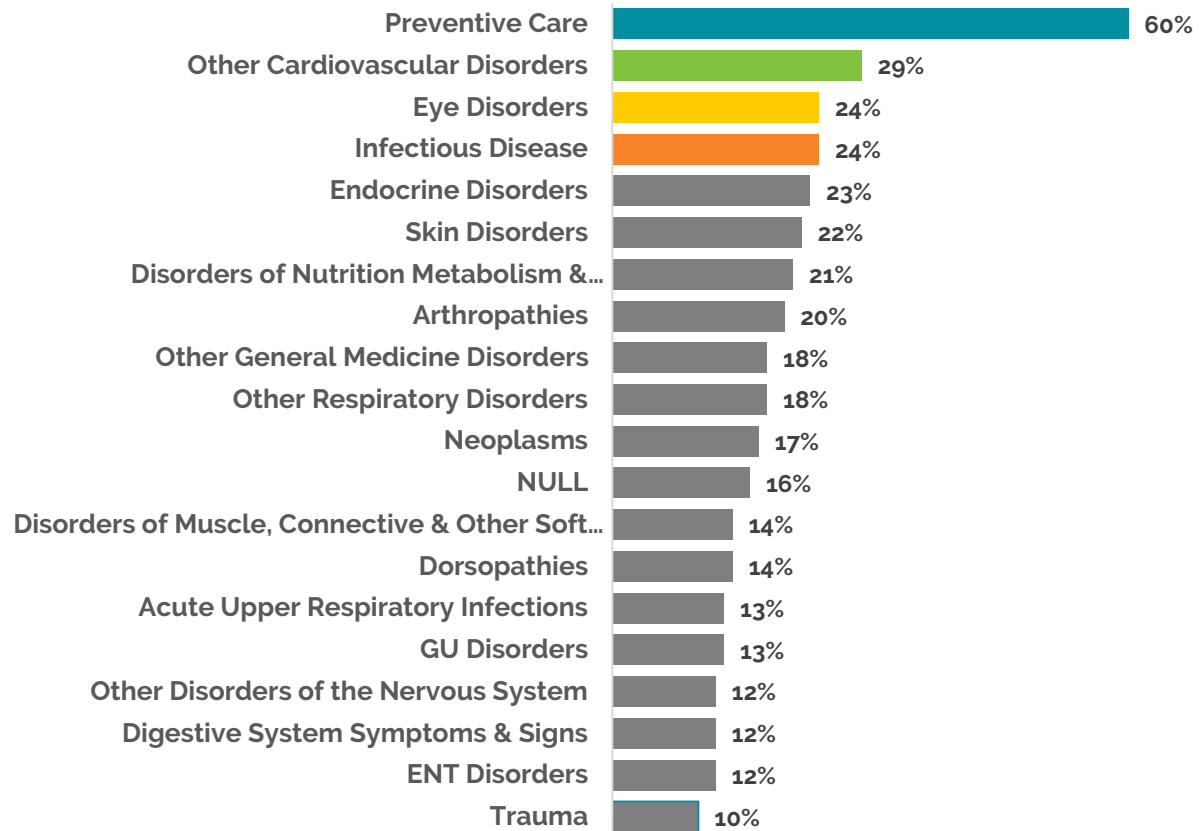
Population – Top 20 Physical Health Conditions

Claim Line Condition Name	Claim Member Count	Member %
Preventive Care	66,063	60%
Other Cardiovascular Disorders	31,358	29%
Eye Disorders	26,737	24%
Infectious Disease	26,372	24%
Endocrine Disorders	25,137	23%
Skin Disorders	24,365	22%
Disorders of Nutrition Metabolism & Development	22,716	21%
Arthropathies	21,380	20%
Other General Medicine Disorders	20,153	18%
Other Respiratory Disorders	20,015	18%
Neoplasms	18,577	17%
NULL	17,926	16%
Disorders of Muscle, Connective & Other Soft Tissues	15,629	14%
Dorsopathies	15,334	14%
Acute Upper Respiratory Infections	14,347	13%
GU Disorders	14,184	13%
Other Disorders of the Nervous System	13,431	12%
Digestive System Symptoms & Signs	13,258	12%
ENT Disorders	12,868	12%
Trauma	10,986	10%

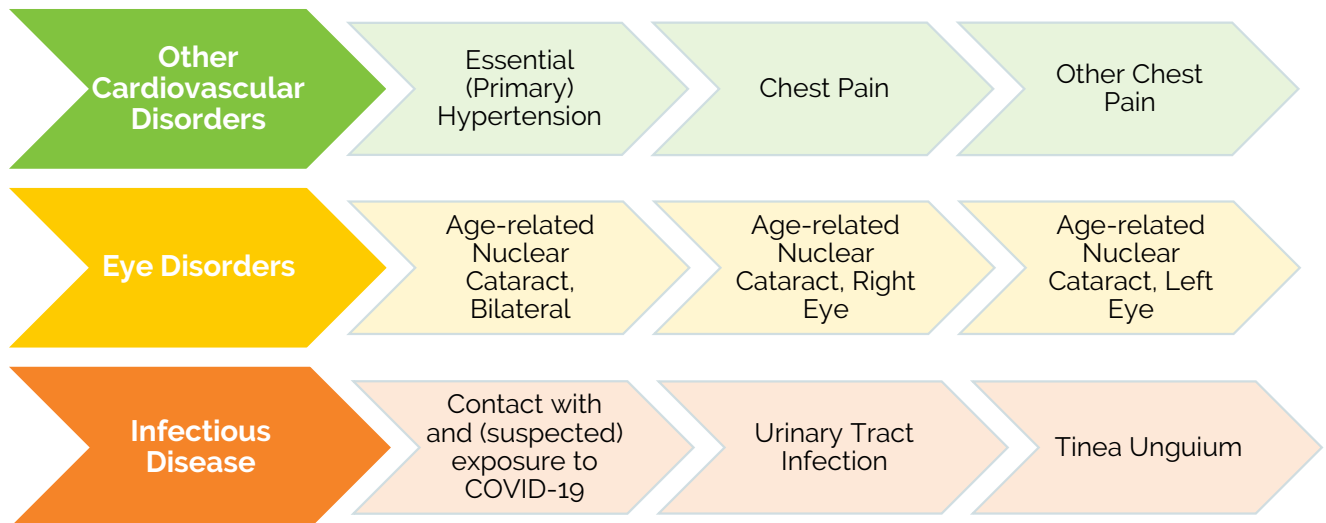


Claim Line Condition – Top 3 Claims Reported (Corresponding ICD-10 Code)

% of Total Population by Clinical Category

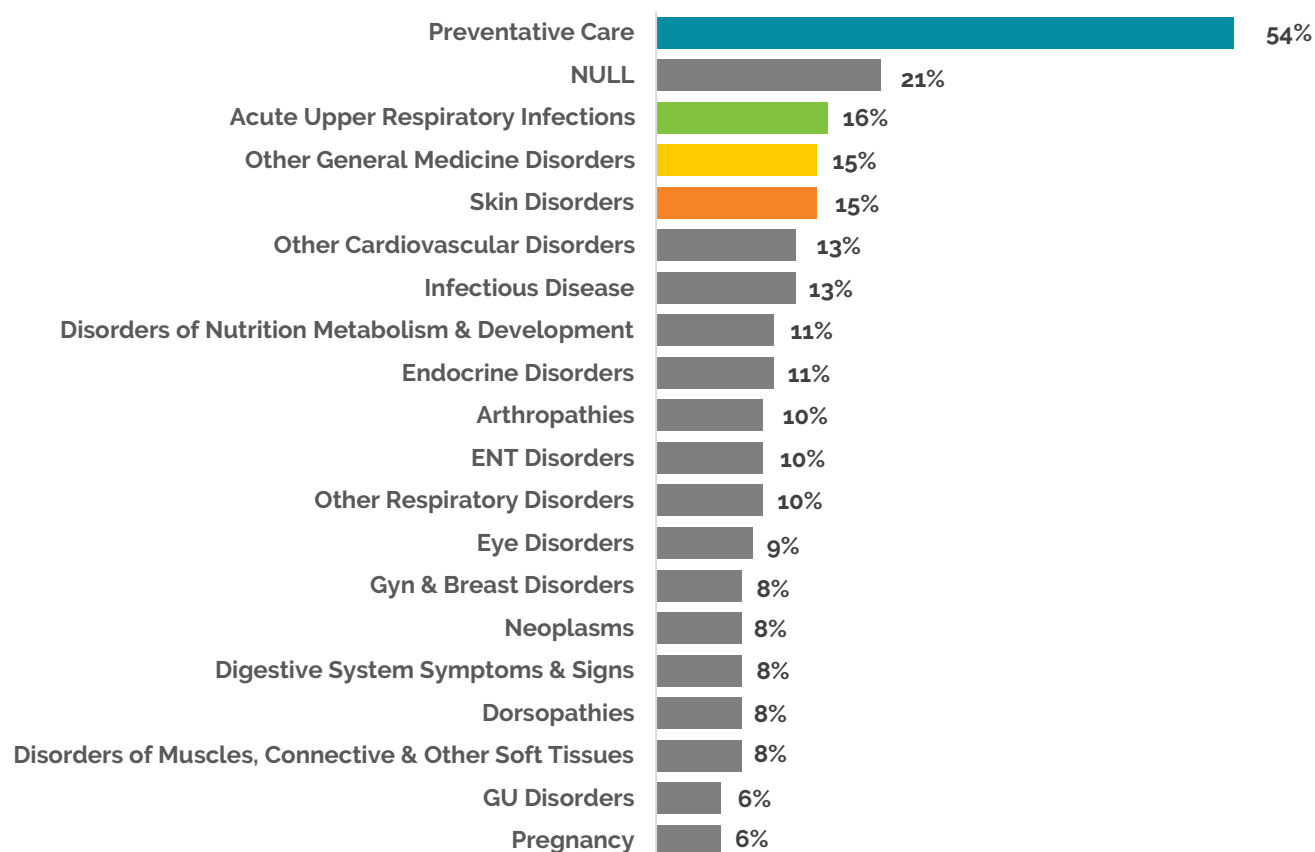


Clinical Category – Top 3 ICD-10 Codes

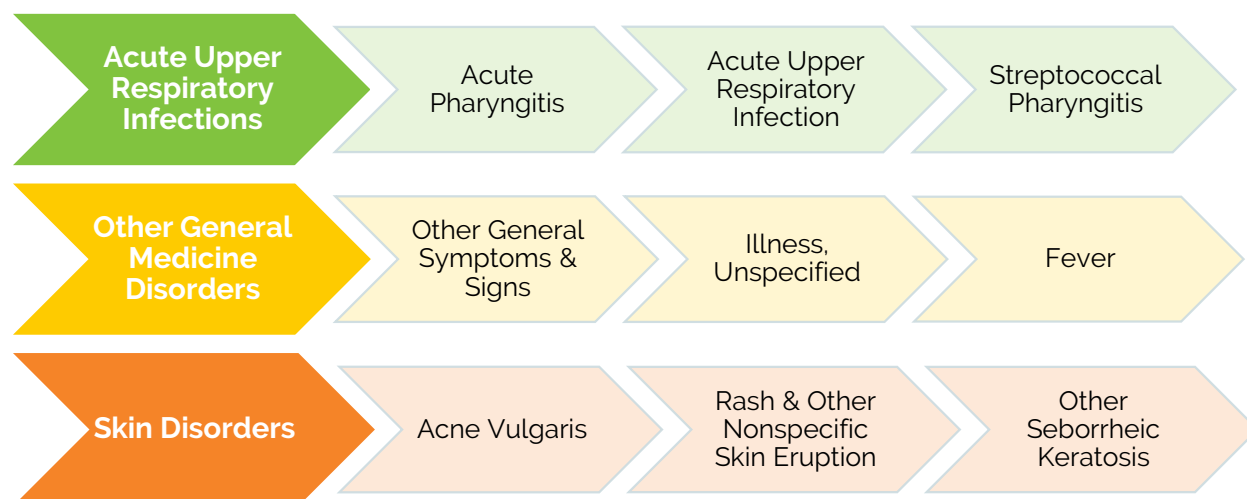


Top Clinical Categories by Line of Business

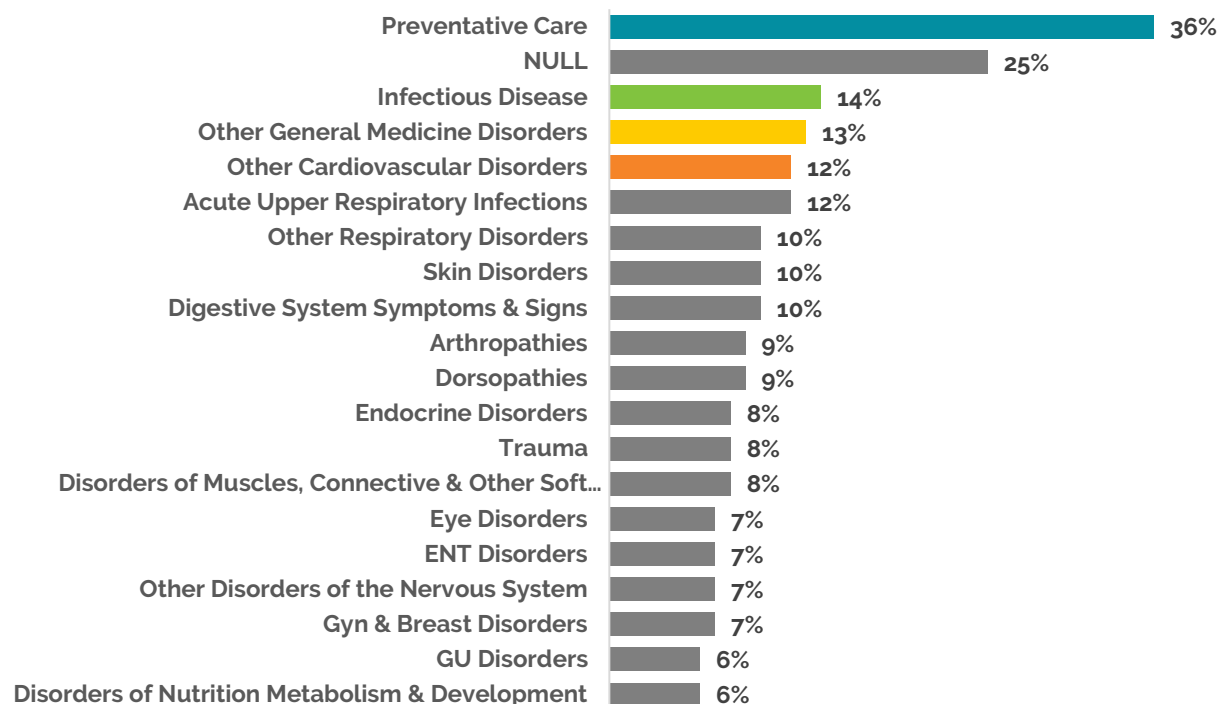
% of Population by Clinical Category - Commercial



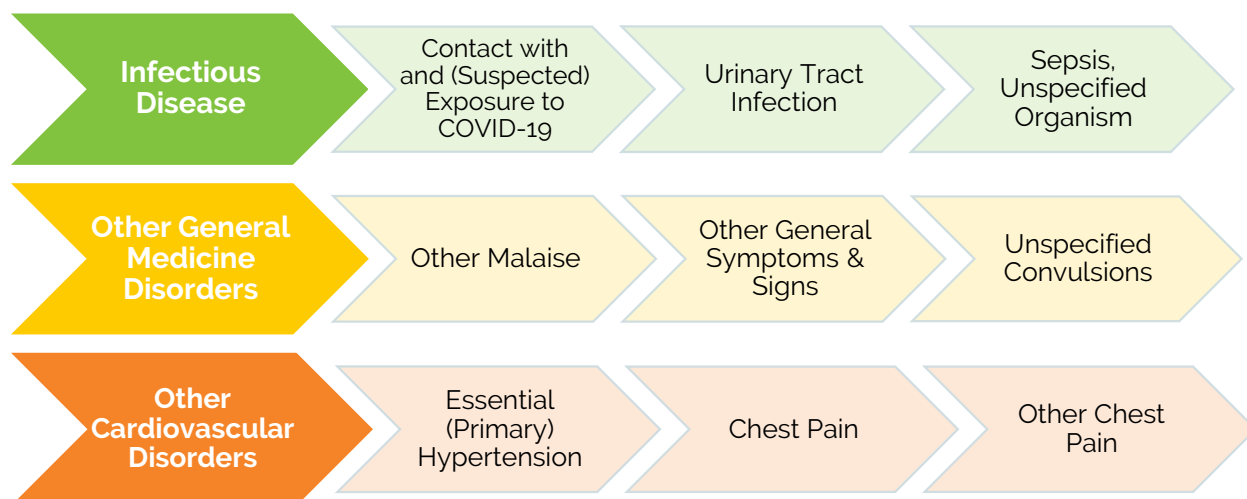
Clinical Category – Top 3 ICD-10 Codes



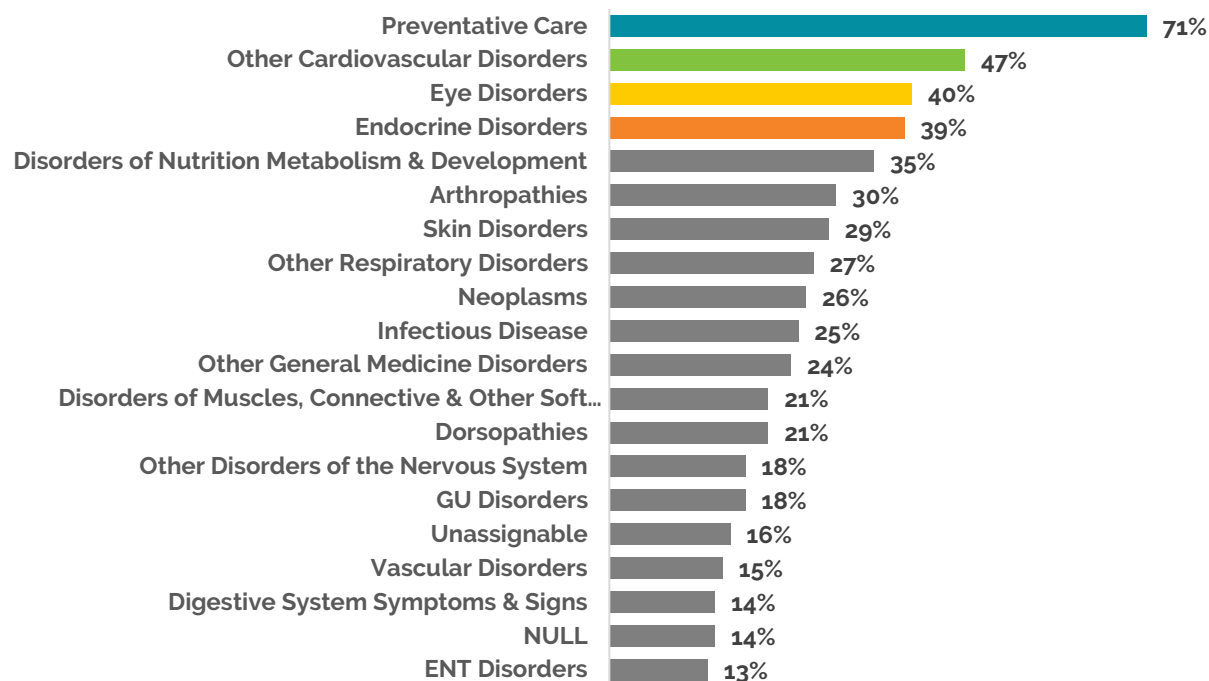
% of Population by Clinical Category - Medicaid



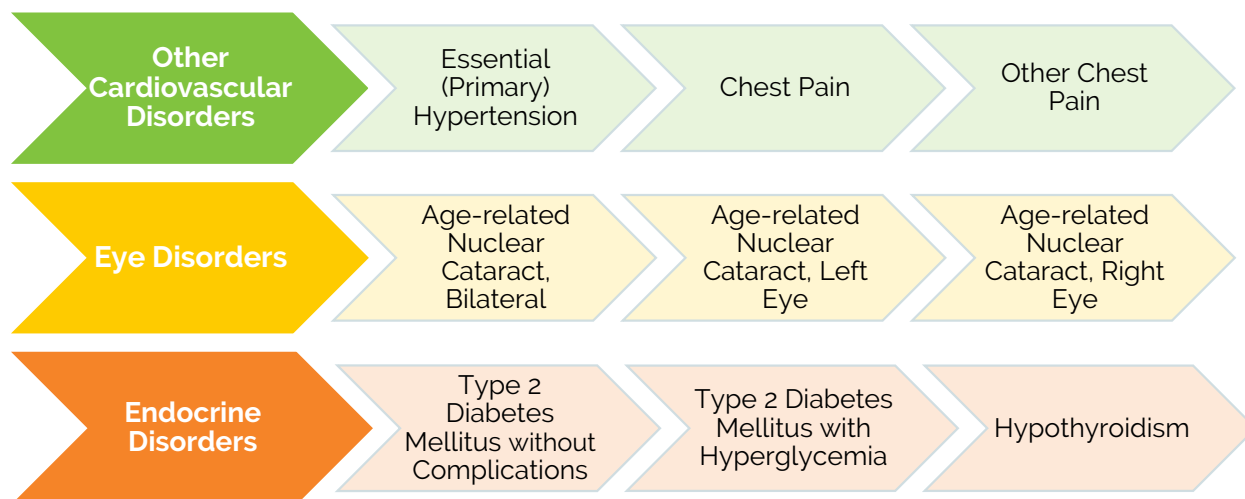
Clinical Category – Top 3 ICD-10 Codes



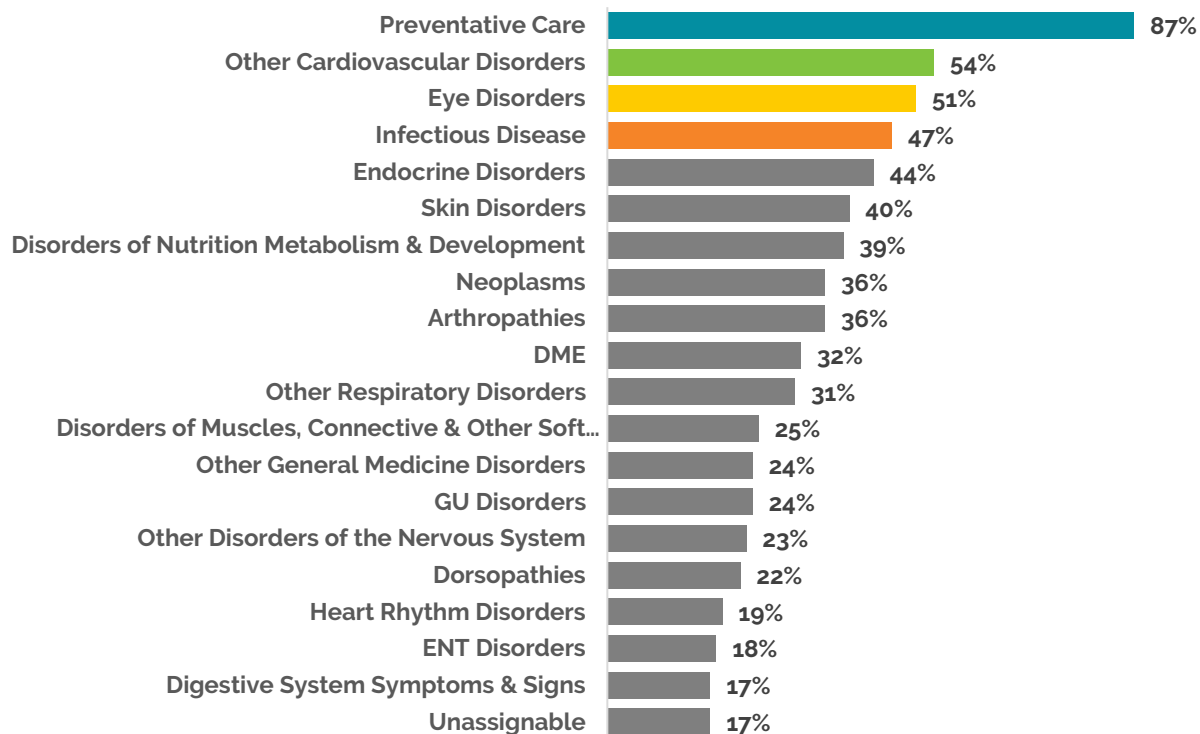
% of Population by Clinical Category - Medicare Advantage



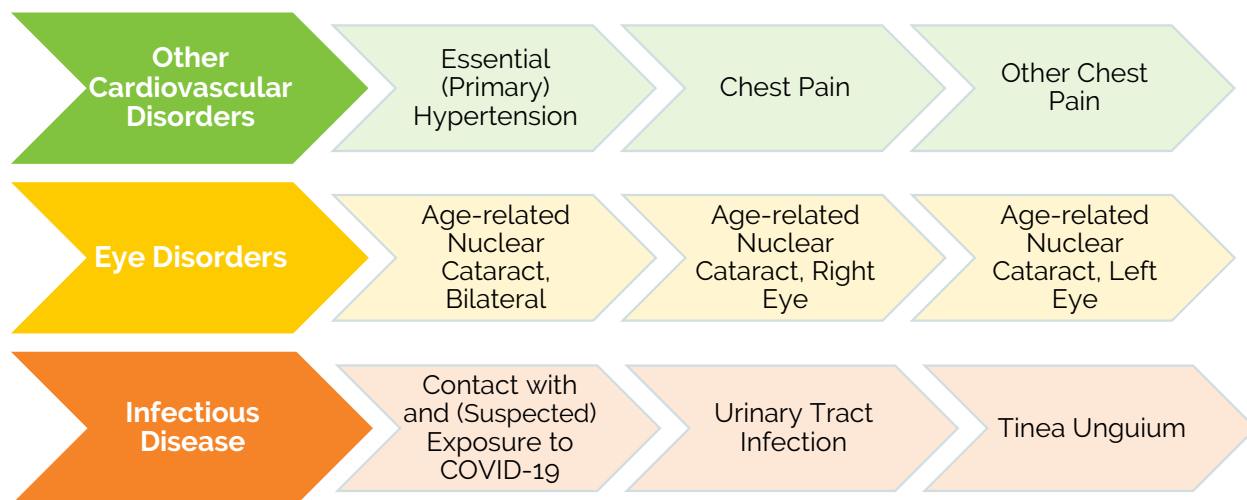
Clinical Category – Top 3 ICD-10 Codes



% of Population by Clinical Category - Medicare FFS



Clinical Category – Top 3 ICD-10 Codes

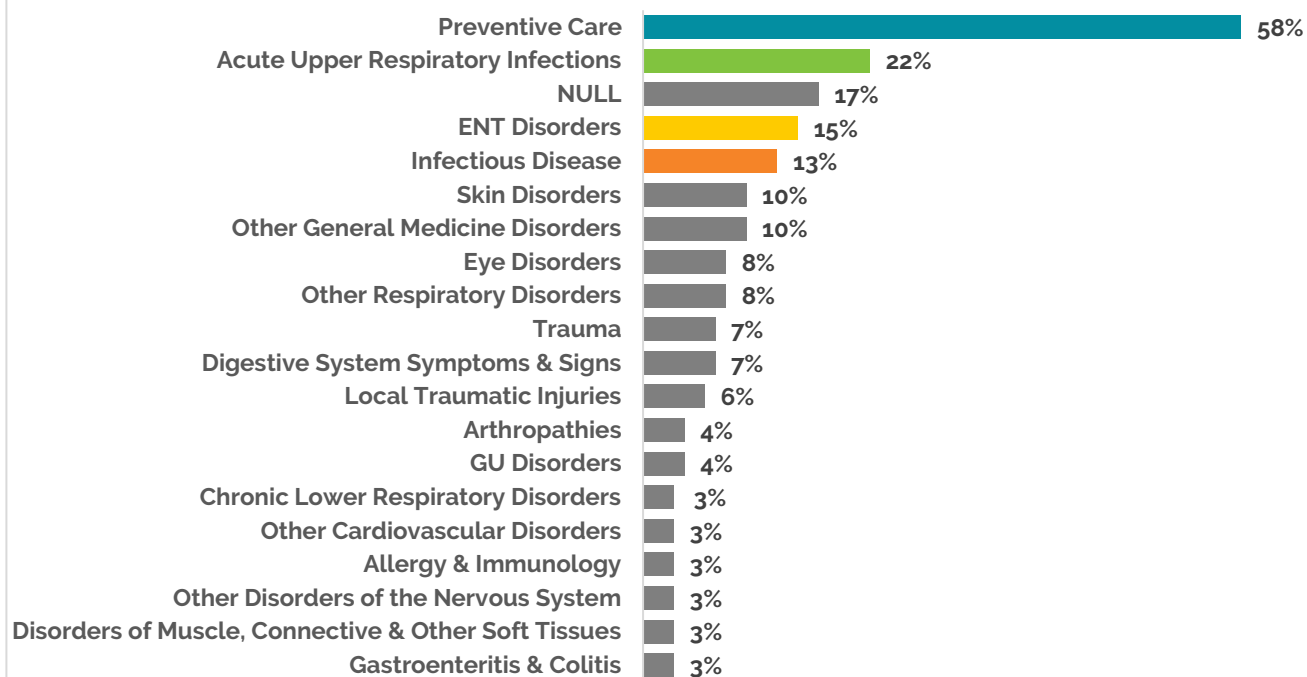


Children and Adolescents (ages 2-19)

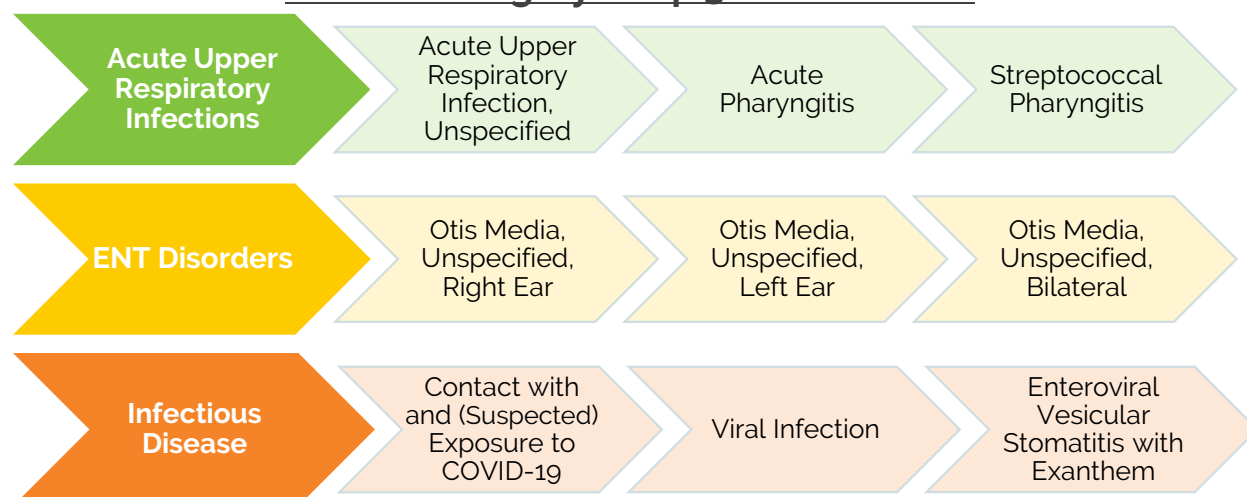
Data Source: CareVio Claims Data

Children and Adolescent Population – Top 20 Physical Health Conditions

2-19 Years Old Population by Clinical Category



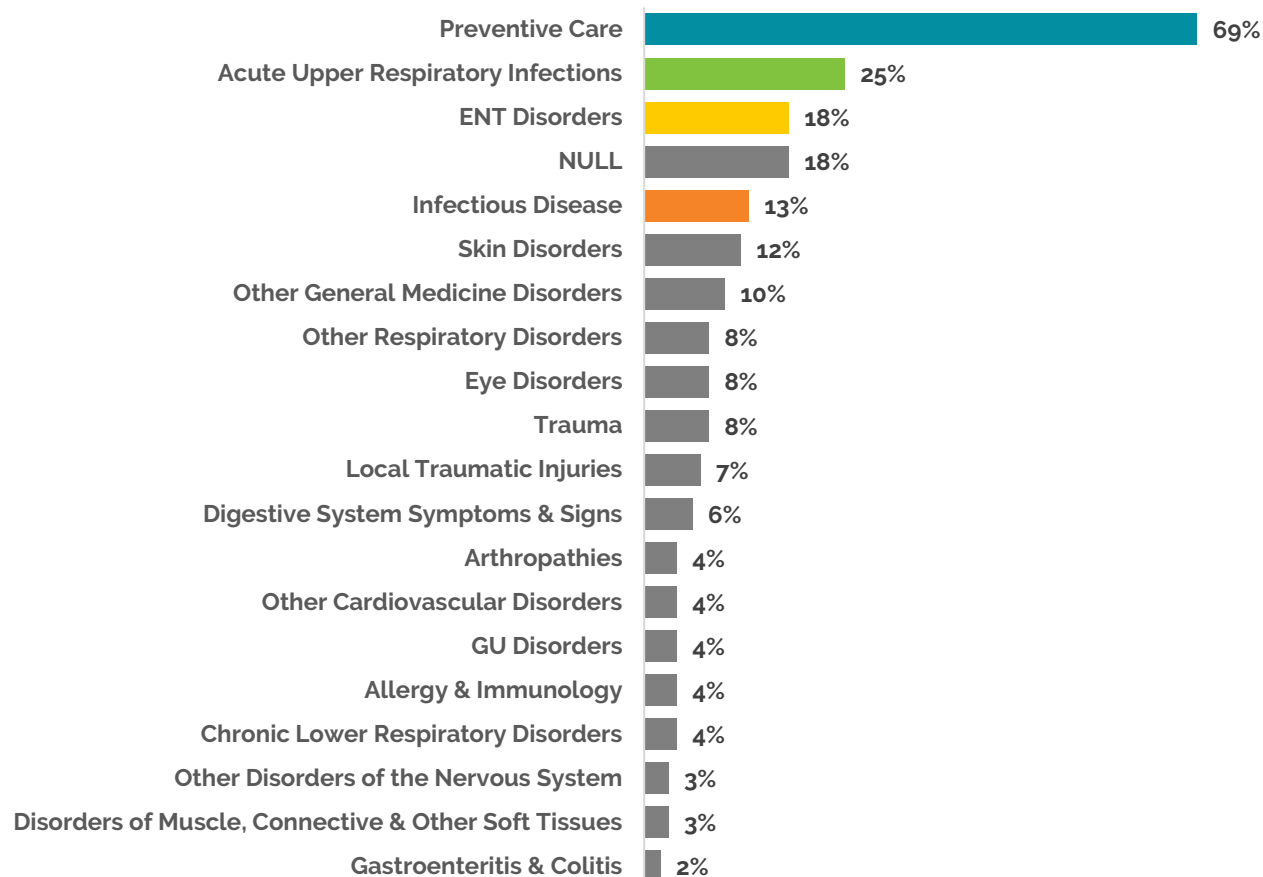
Clinical Category – Top 3 ICD-10 Codes



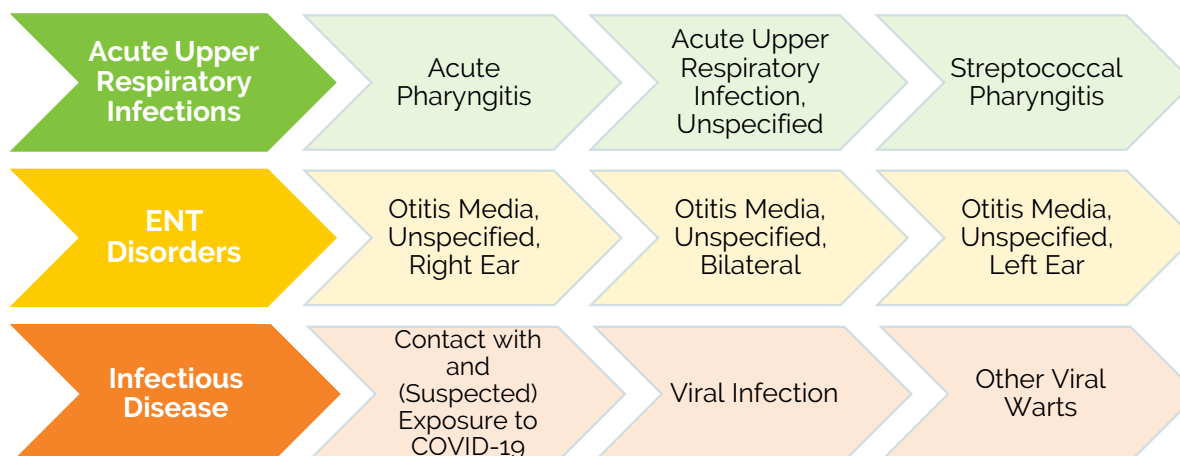
Children and Adolescents Clinical Category by Line of Business

Data Source: CareVio Claims Data

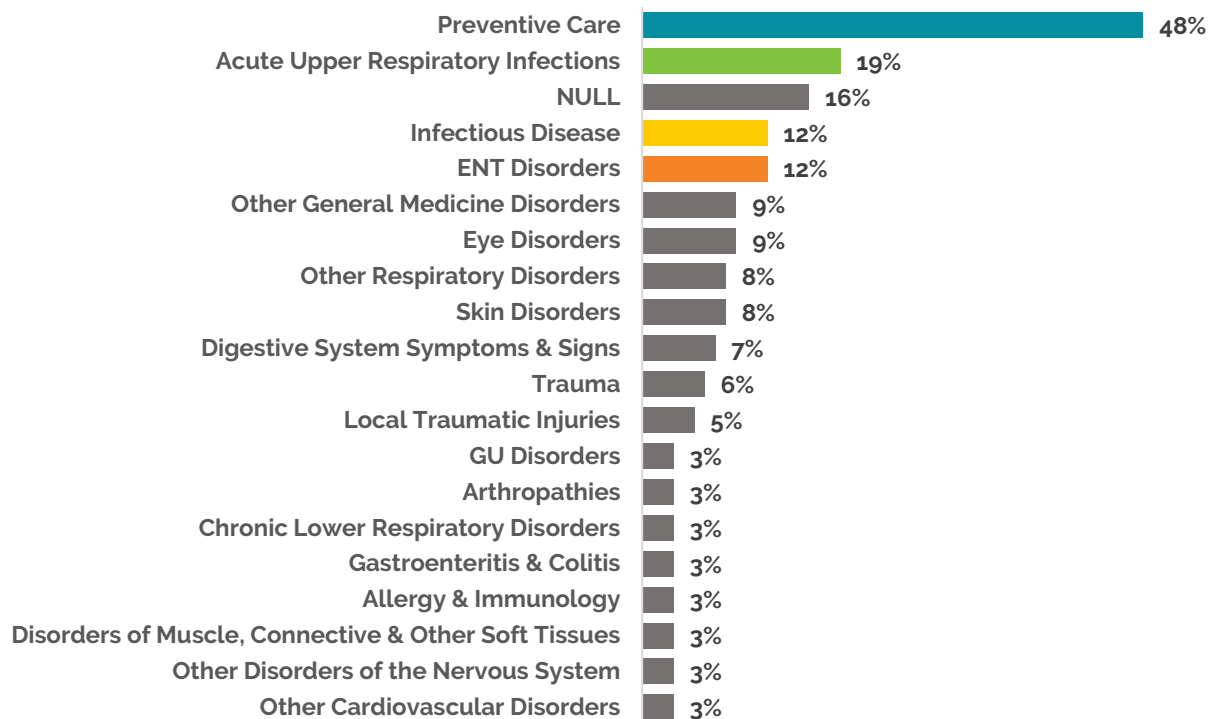
2-19 Years Old Population By Clinical Category Commercial



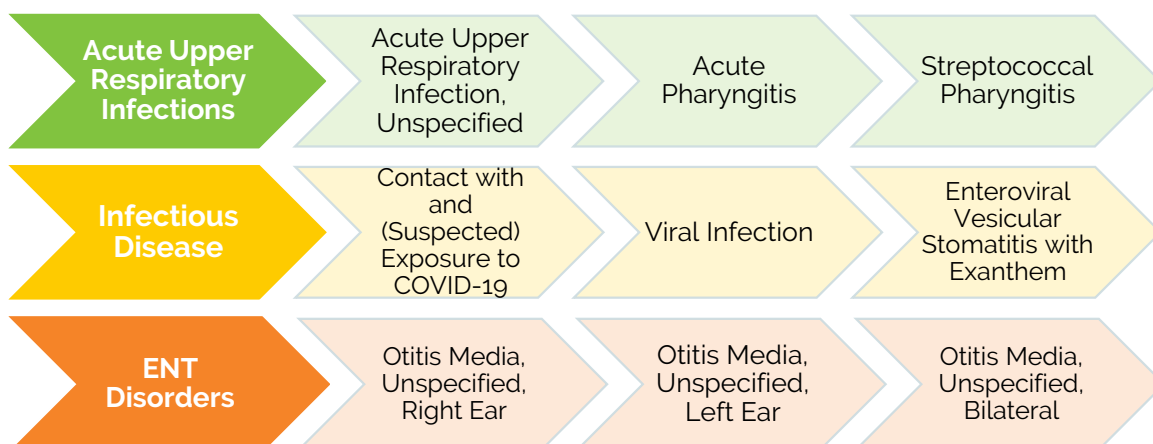
Clinical Category – Top 3 ICD-10 Codes



2-19 Years Old Population by Clinical Category Medicaid



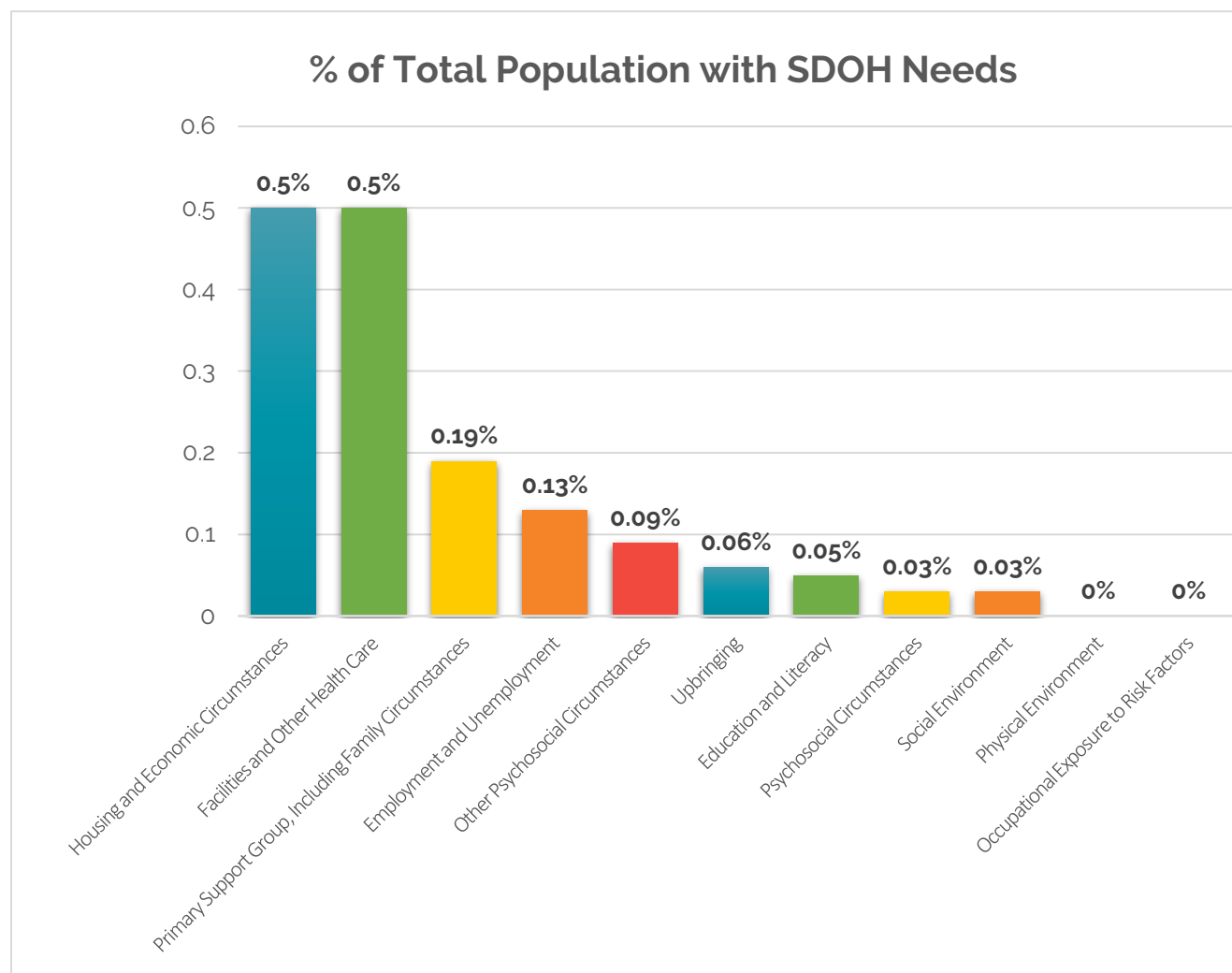
Clinical Category – Top 3 ICD-10 Codes



Social Determinants of Health

Data Source: CareVio Claims, PowerChart, Aerial

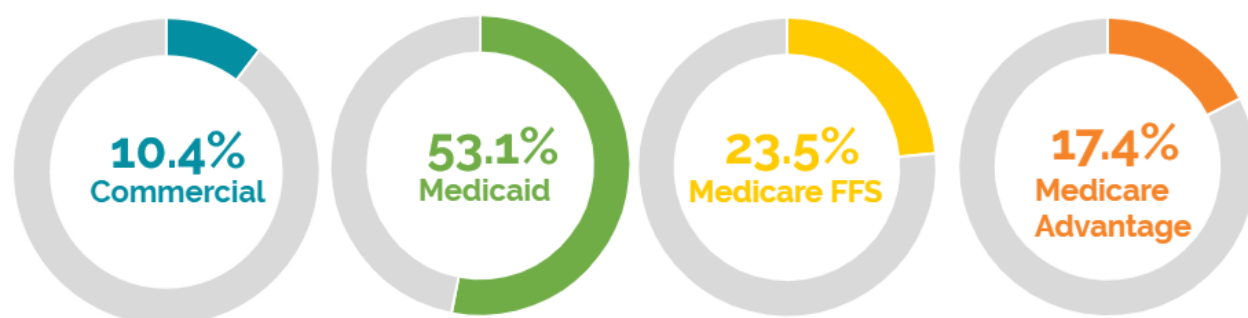
Total Population



SDoH Category	Commercial	Medicaid	Medicare Advantage	Medicare FFS	Grand Total (% of Total Population)
Housing and Economic Circumstances	67	422	60	48	565 (.50%)
Facilities and Other Health Care	22	145	170	233	546 (.50%)
Primary Support Group, Including Family Circumstances	32	96	28	56	207 (0.19%)
Employment and Unemployment	22	109	6	10	141 (.13%)
Other Psychosocial Circumstances	10	74	7	7	94 (.09%)
Upbringing	12	53	5	5	71 (.06%)
Education and Literacy	10	36	5	5	54 (.05%)
Psychosocial Circumstances	10	27	0	0	36 (.03%)
Social Environment	4	18	6	6	32 (.03%)
Physical Environment	0	1	0	1	2 (0%)
Occupational Exposure to Risk Factors	0	0	0	0	0 (0%)
Total SdoH Count (% of Total Payer Population)	158 (.50%)	805 (2.3%)	264 (1.7%)	357 (1.2%)	1516 (1.4%)
Total SdoH % (by identified total SdoH)	10.40%	53.10%	17.40%	23.50%	

**Members can be counted twice within percentages*

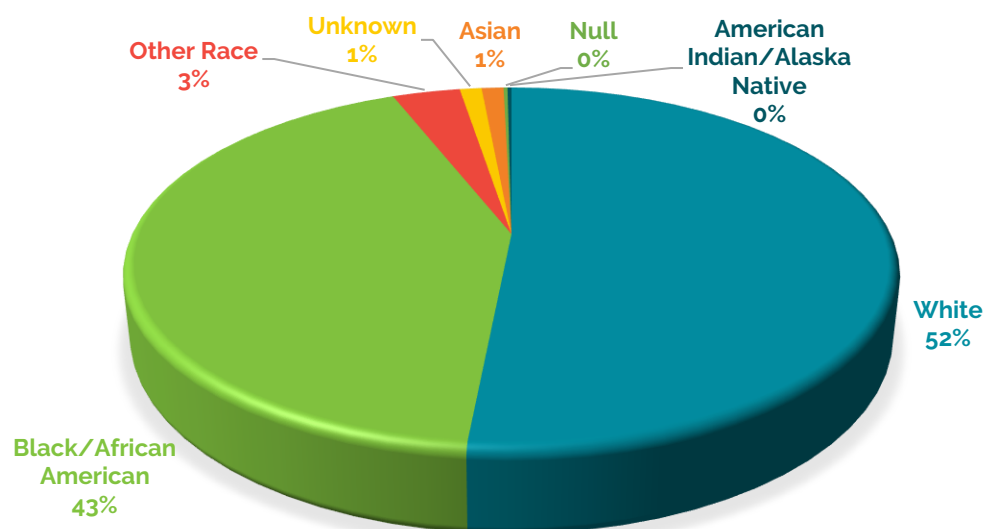
By Line of Business for Total SDOH Identified



**Members can be identified from 2 different sources (Soarian and Claims) with more than 1 SDOH need*



Race by SDOH Identified



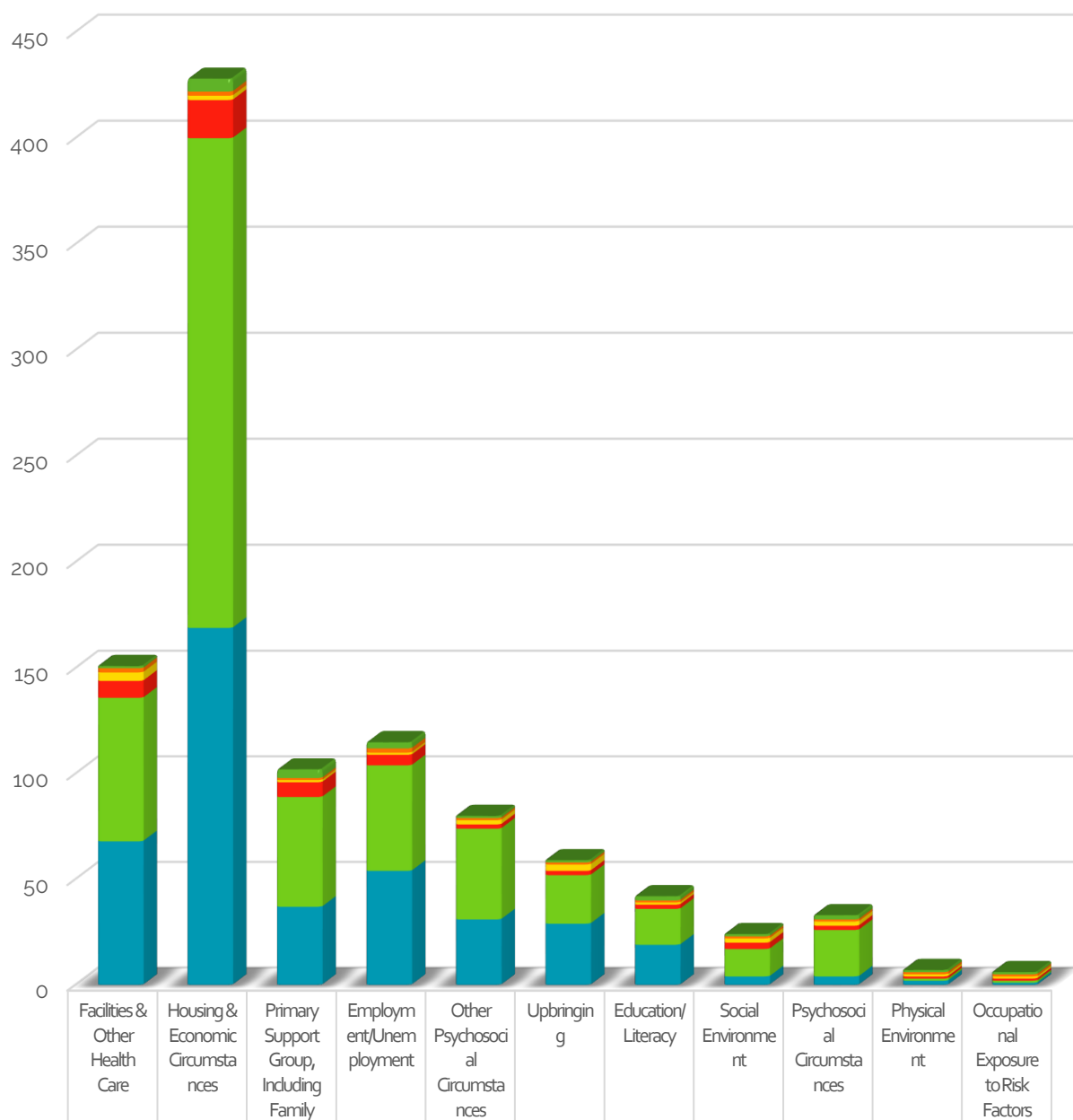
Language Literacy Among Members with SDOH Needs

Language	Member Count	Member %
English	1473	97.2%
Other	18	1.2%
Spanish	11	.7%
Undetermined	9	.6%
Grand Total	1516	100%



Medicaid SDOH

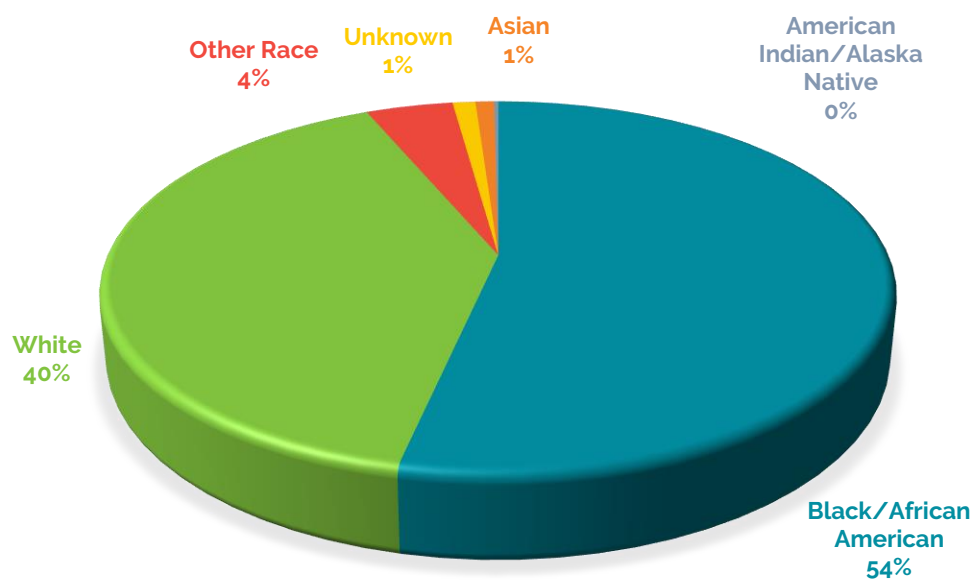
Medicaid Member Count of SDOH Needs by Category & Race



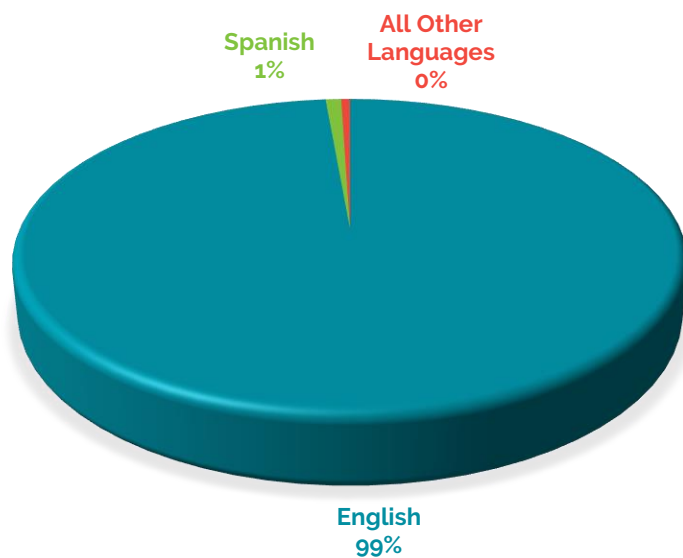
Unknown	1	6	4	3	1	1	2	1	2	1	1
American Indian/Alaska Native	2	2	1	2	1	1	1	1	1	1	1
Asian	4	2	1	1	2	3	1	2	2	1	1
Other Race	8	18	7	5	2	2	2	3	2	1	1
Black/African American	68	231	52	50	43	23	17	13	22	1	1
White	68	169	37	54	31	29	19	4	4	2	1



Medicaid SDOH Member Demographics



Language of Medicaid Members with SDOH Needs

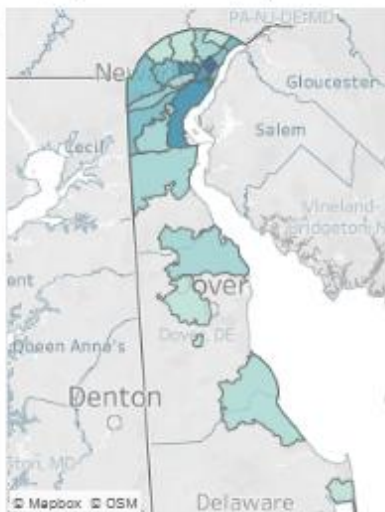


Medicaid SDOH Needs by Category and Zip Code Geocoding

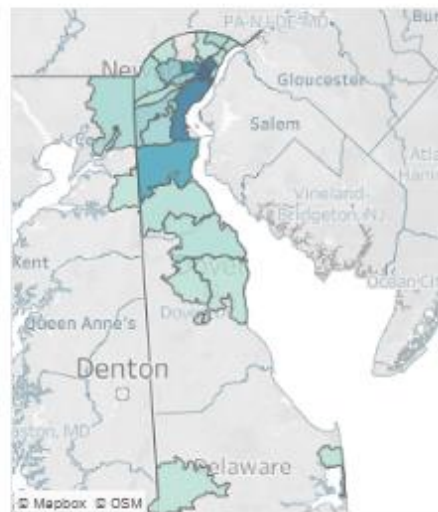
Education and Literacy



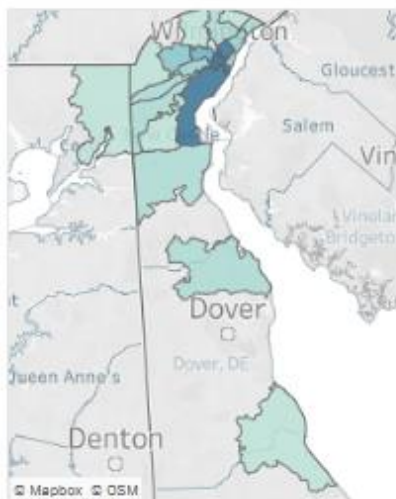
Employment and Unemployment



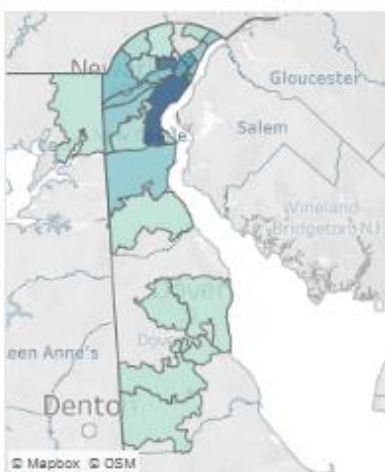
Facilities and Other HealthCare



Other Psychosocial Circumstances



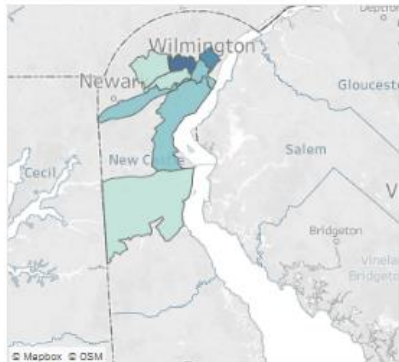
Primary Support Group, Including Family Circumstances



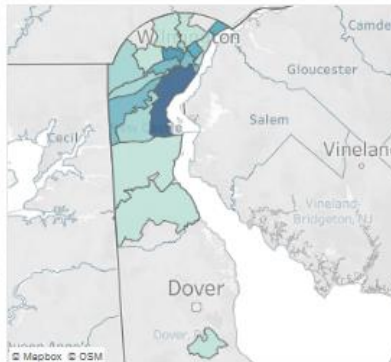
Psychosocial Circumstances



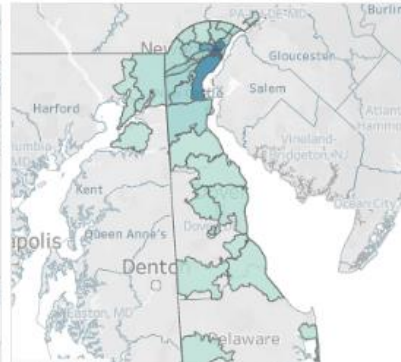
Social Environment



Upbringing



Housing and Economic Circumstances



Members with Disabilities

Data Source: CareVio Claims Data

Disability	Commercial	Medicaid	Medicare Advantage	Medicare FFS	Total # in Disability Category
Intellectual Disabilities	0	6	2	47	55
Pervasive and Specific Developmental Disorders	0	58	2	66	126
Hearing Impairment	263	235	731	2324	3553
Visual Impairment	161	196	187	510	1054
Speech Impairment	35	68	105	235	443
Ambulatory Issues/Mobility Impairment	105	499	741	2036	3380
Total	564	1062	1768	5218	8611 (7.9%)
Total % of Payer Population	1.8%	3.0%	11.1%	17.9%	

*Member may have more than one disability, and may be attributed to more than one insurance payer

Total CareVio Population with at least one disability 7% (7922 members)

Members with Serious and Persistent Mental Illness (SPMI)

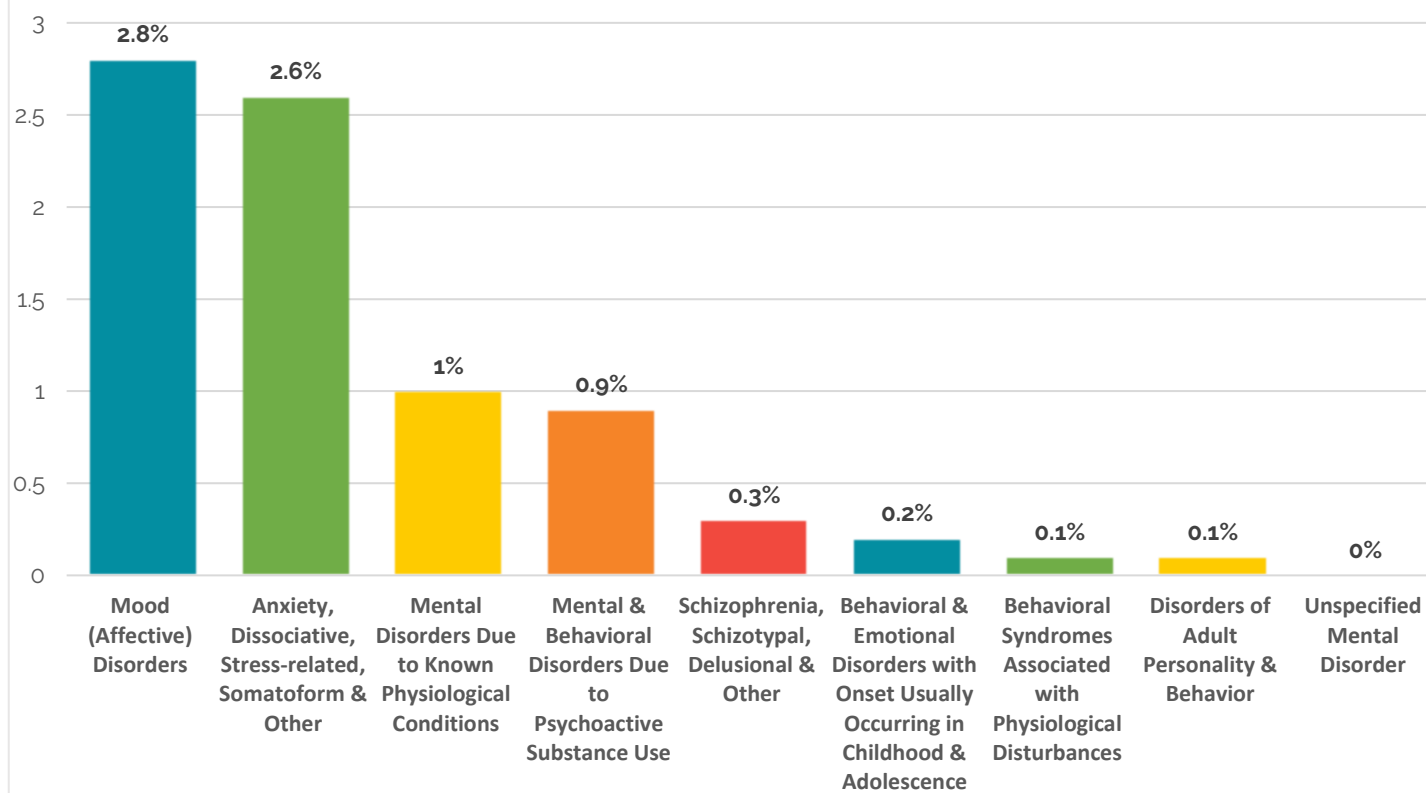
Data Source: CareVio Claims Data

Total Population

SPMI Category	Distinct Member Count	SPMI Claims/Total SPMI Identified (%)	% of Total Population (109,283)
Mood (Affective) Disorders	3050	34.9%	2.8%
Anxiety, Dissociative, Stress-related, Somatoform & Other	2890	33.1%	2.6%
Mental Disorders Due to Known Physiological Conditions	1101	12.6%	1.0%
Mental & Behavioral Disorders Due to Psychoactive Substance Use	933	10.7%	0.9%
Schizophrenia, Schizotypal, Delusional & Other	275	3.2%	0.3%
Behavioral & Emotional Disorders with Onset Usually Occurring in Childhood & Adolescence	227	2.6%	0.2%
Behavioral Syndromes Associated with Physiological Disturbances	149	1.7%	0.1%
Disorders of Adult Personality & Behavior	81	0.9%	0.1%
Unspecified Mental Disorder	24	0.3%	0.0%
Total	8730	100.0%	8.0%

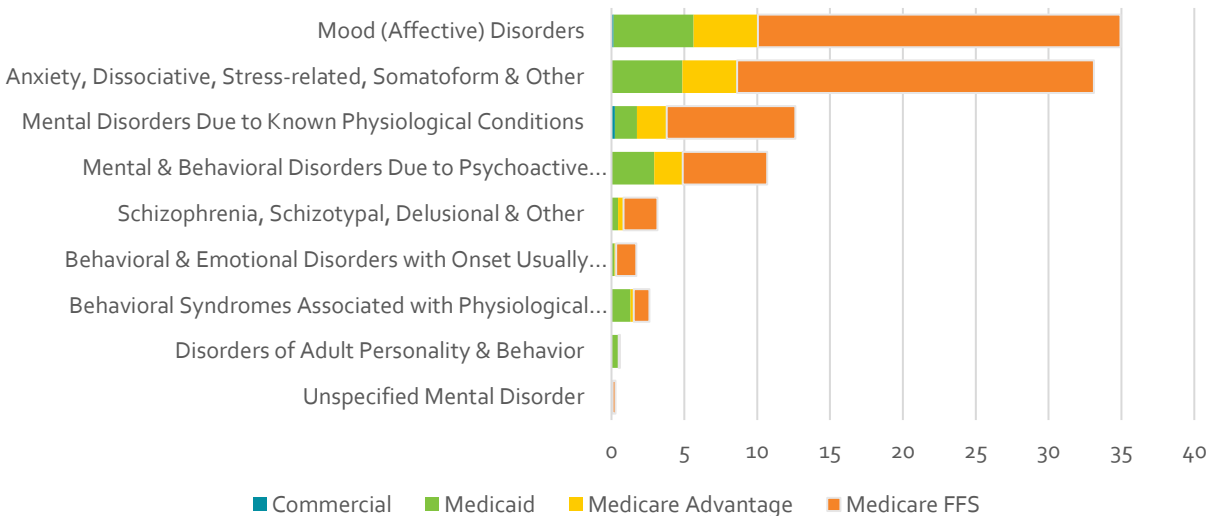


% of Total Population by SPMI Category



By Line of Business (SPMI Prevalence per LOB)

% of SPMI LOB Members by Total SPMI Identified



SPMI Category	Commercial **	Medicaid	Medicare Advantage	Medicare FFS
Mood (affective) disorders	0.15%	5.48%	4.43%	24.88%
Anxiety, dissociative, stress-related, somatoform and other	0.00%	4.87%	3.75%	24.49%
Mental disorders due to known physiological conditions	0.24%	1.50%	2.06%	8.83%
Mental and behavioral disorders due to psychoactive substance use	0.02%	2.92%	1.96%	5.78%
Schizophrenia, Schizotypal, delusional and other	0.00%	0.46%	0.36%	2.34%
Behavioral syndromes associated with physiological disturbances	0.00%	0.22%	0.11%	1.37%
Behavioral and emotional disorders with onset usually occurring in childhood and adolescence	0.02%	1.28%	0.22%	1.08%
Disorders of adult personality and behavior	0.00%	0.48%	0.02%	0.42%
Unspecified mental disorder	0.00%	0.00%	0.09%	0.18%

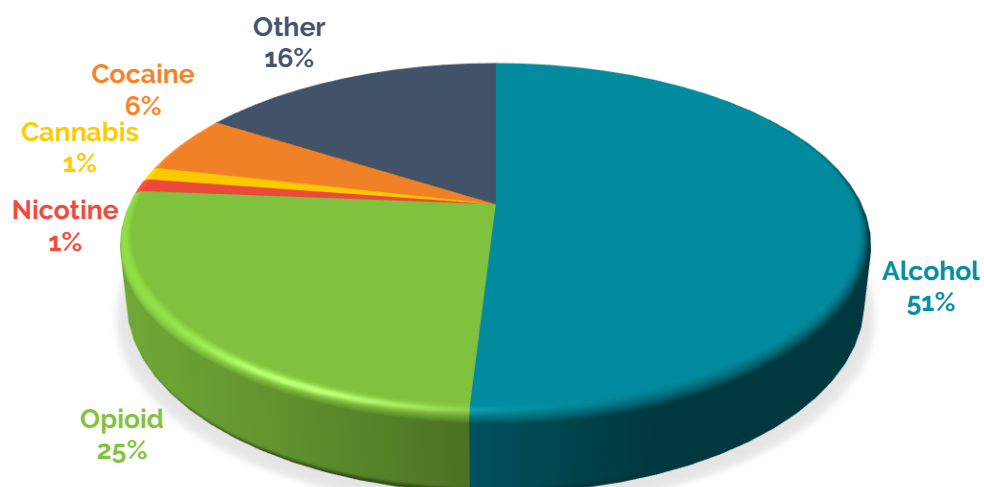
** SPMI claims data does not reflect 100% of SPMI diagnoses, as Commercial and CMS payers restricted some behavioral health claims to CareVio. Thus, the above data is an incomplete representation of the behavioral claims for these populations.



SPMI Category: Mental and Behavioral Disorders Due to Psychoactive Substance Use (Substance Use Disorder)

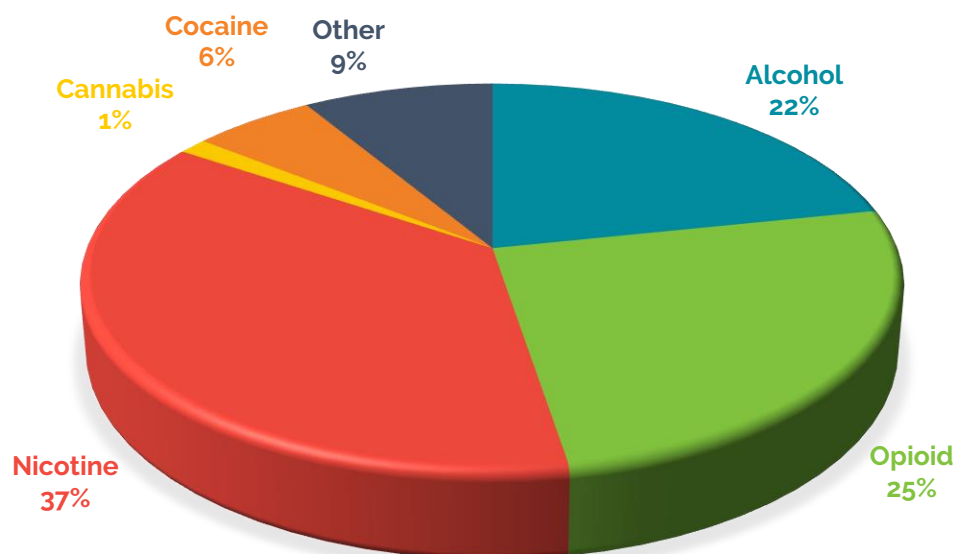
Medicaid Population

Medicaid	
Substance	Member Count
Alcohol	217
Opioid	108
Nicotine	5
Cannabis	5
Cocaine	23
Other	68



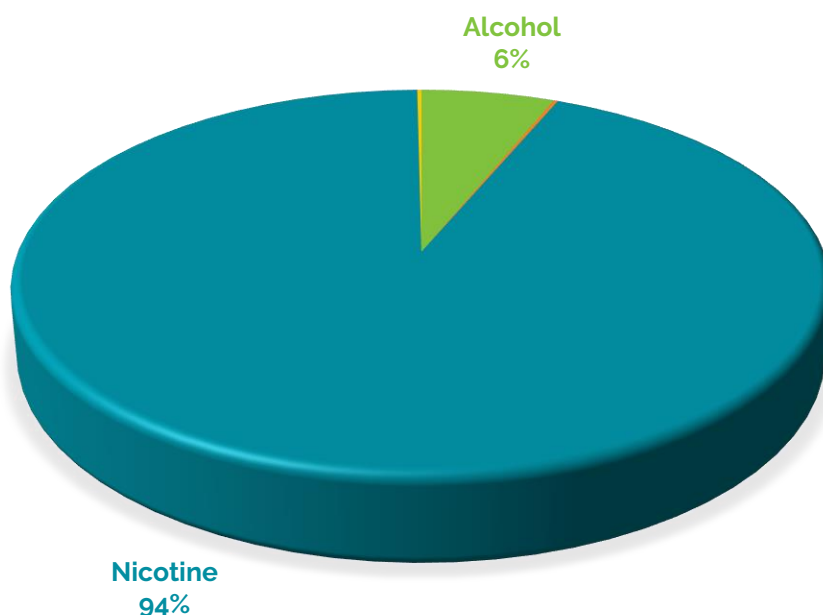
Medicare Advantage Population

Medicare Advantage	
Substance	Member Count
Alcohol	50
Opioid	59
Nicotine	85
Cannabis	3
Cocaine	13
Other	20



Medicare FFS

Medicare FFS	
Substance	Member Count
Alcohol	32
Opioid	1
Nicotine	484
Cannabis	0
Cocaine	0
Other	1



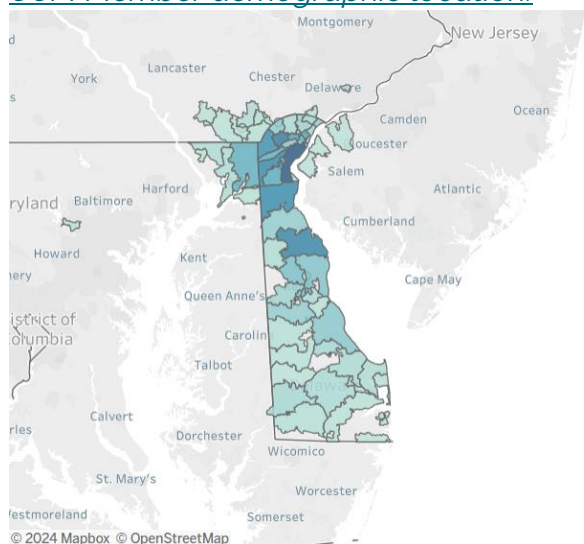
Other Subpopulations

Data Source: CareVio Program Data (enrolled in a program >60 days)

Comprehensive Case Management (CCM)

Denominator: 624 Unique Patients

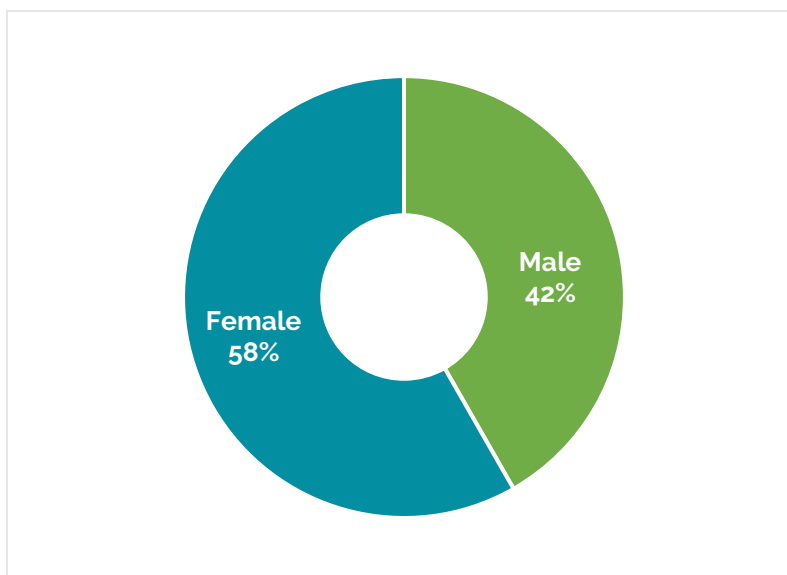
CCM Member demographic location:



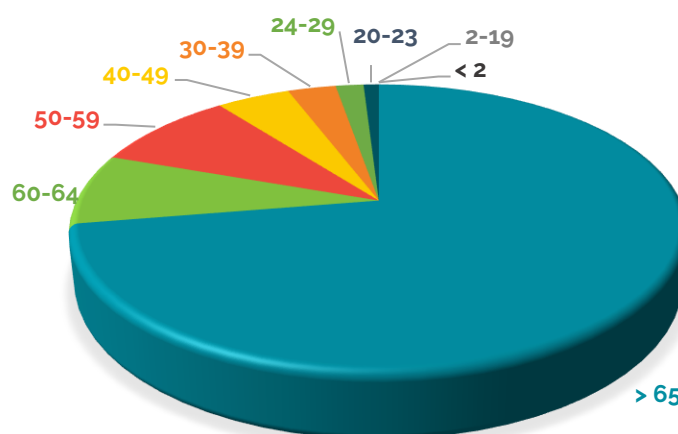
Top 3 Zip Codes:

- 19720
- 19808
- 19977

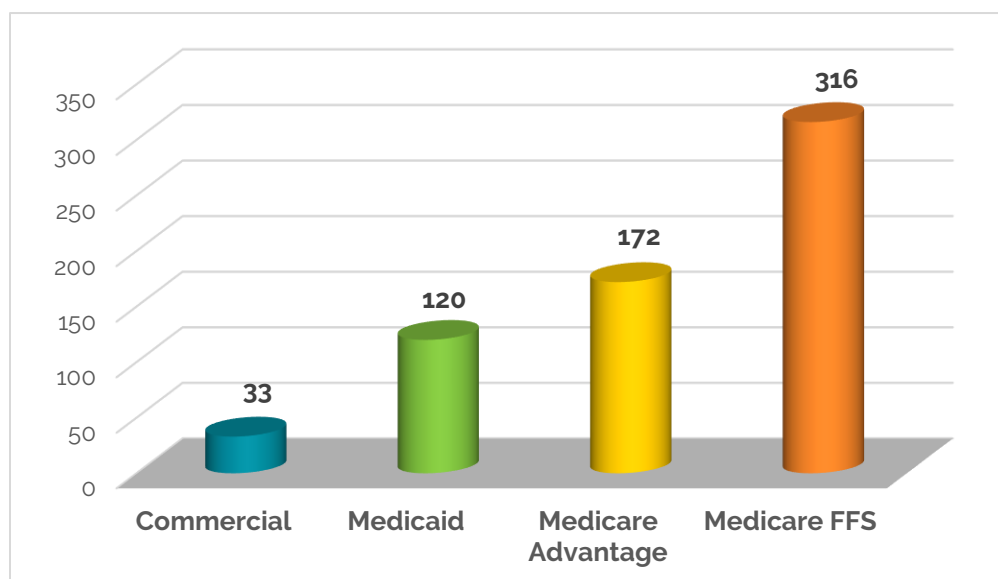


CCM Participant Gender:CCM Age Distribution:

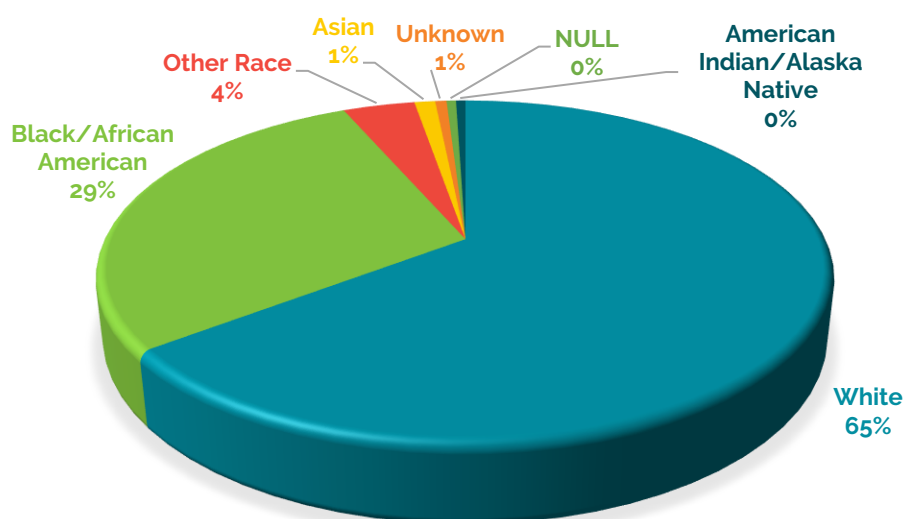
Age	Member Count	Member %
≥ 65	451	72.28%
60-64	50	8.01%
50-59	57	9.13%
40-49	29	4.65%
30-39	19	3.04%
24-29	11	1.76%
20-23	6	0.96%
2-19	0	0.00%
< 2	0	0.00%
Total	624	100.00%



CCM Participant Member Count Line of Business:



CCM Race Distribution

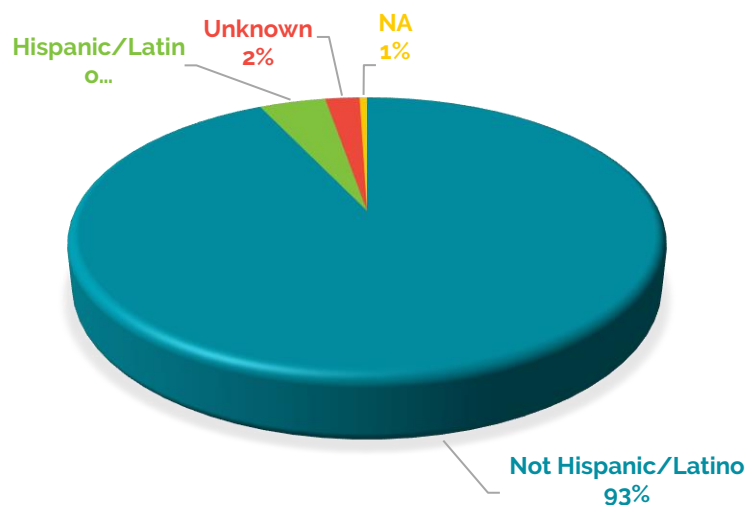


Race	Member Count	Member %
White	403	64.6%
Black/African American	180	28.8%
Other Race	24	3.8%
Asian	7	1.1%
Unknown	4	0.6%
NULL	3	0.5%
American Indian/Alaska Native	3	0.5%



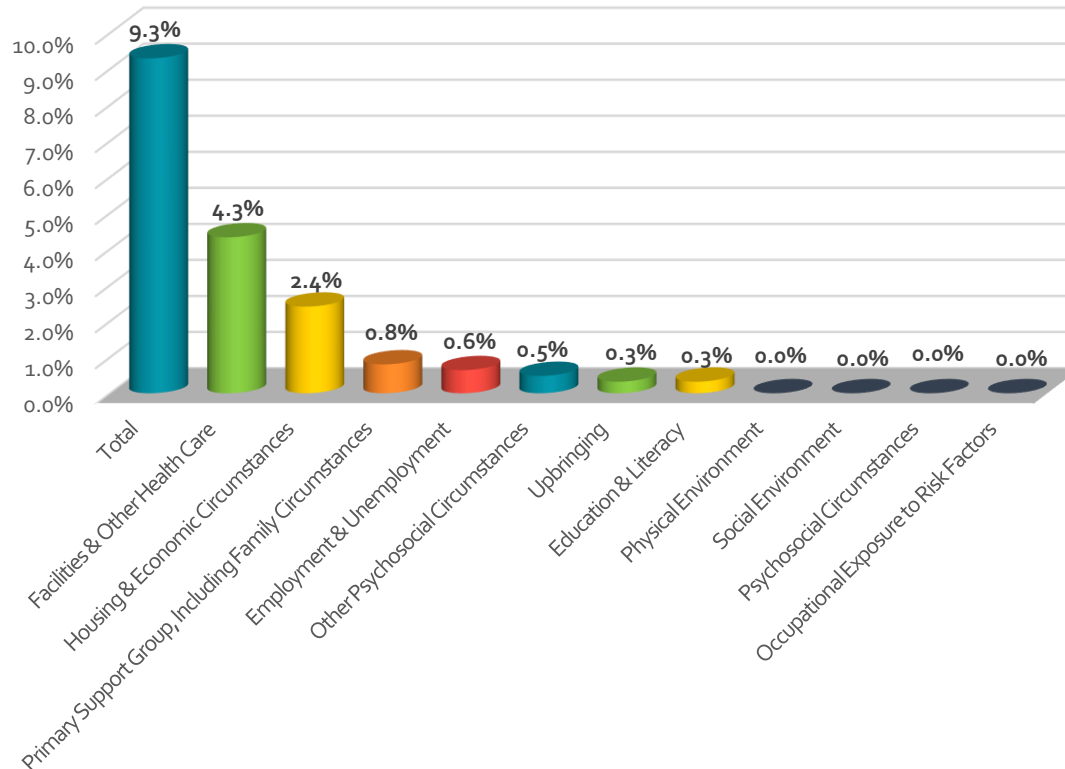
CCM Ethnicity Distribution:

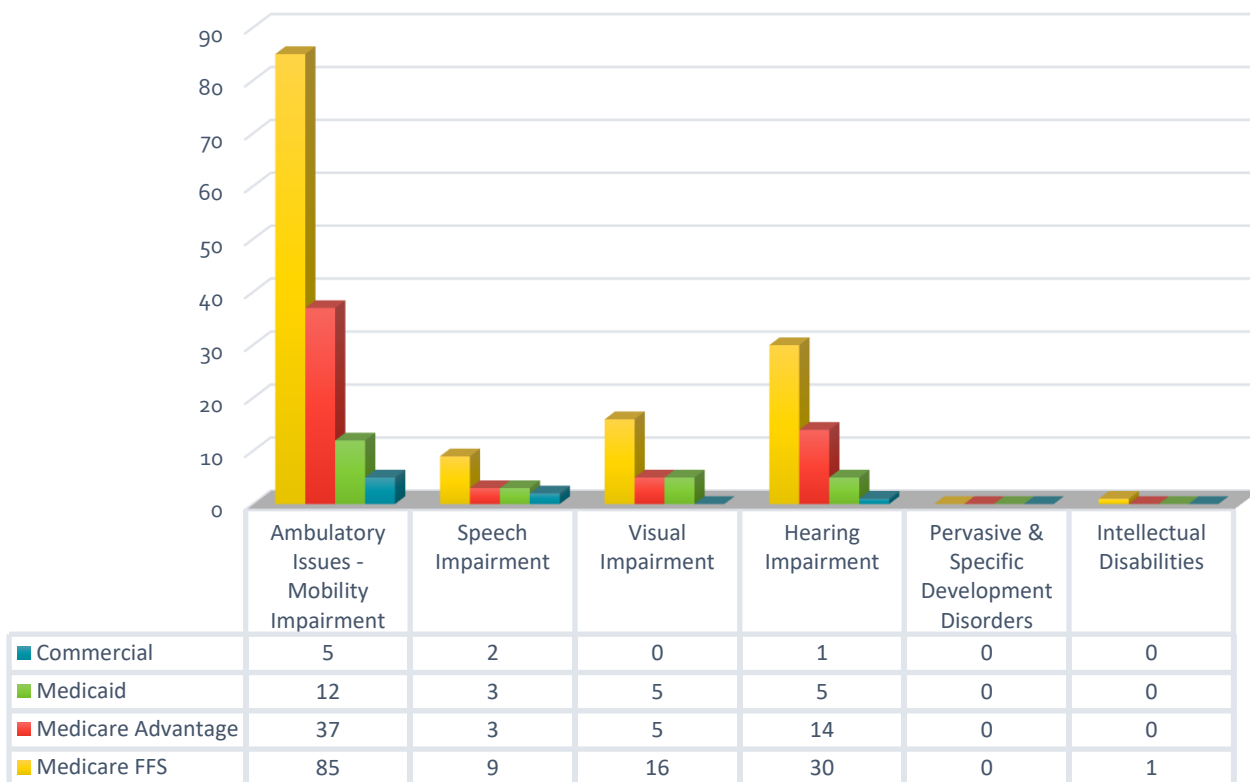
Ethnicity	Member Count	Member %
Not Hispanic/Latino	580	92.95%
Hispanic/Latino	27	4.33%
Unknown	14	2.24%
NA	3	0.48%

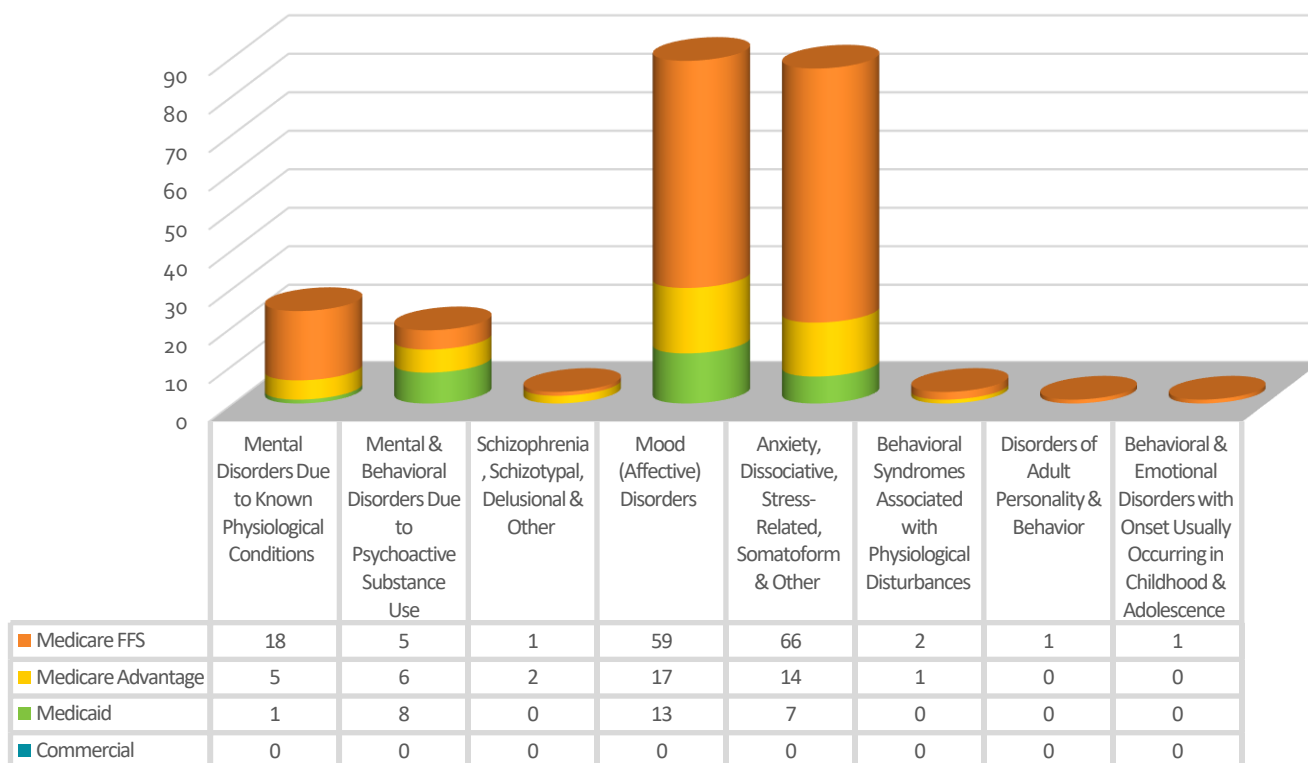


CCM SDOH:

% of CCM Participants with SDoH Needs



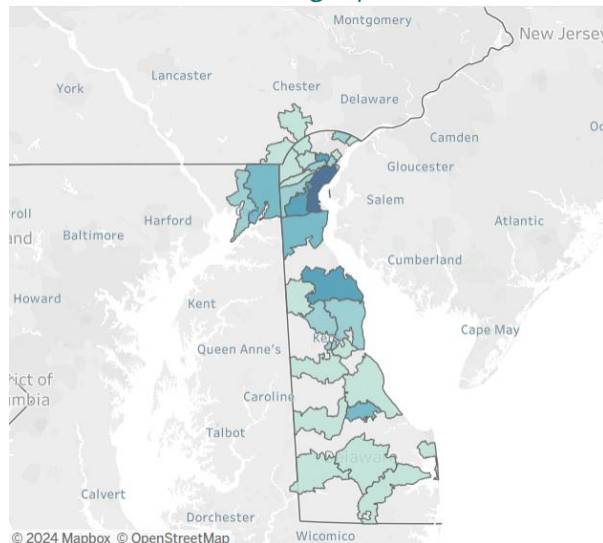
CCM Disabilities:**CCM Participant Member Count with Disabilities**



Chronic Obstructive Pulmonary Program (COPD)

Denominator: 58 Unique Patients

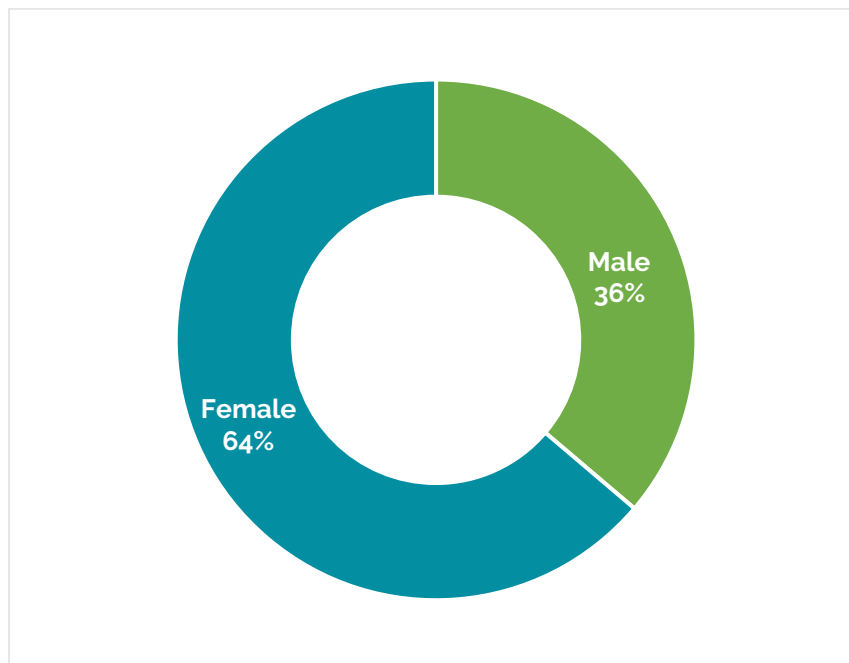
COPD Member demographic location:



Top 3 Zip Codes:

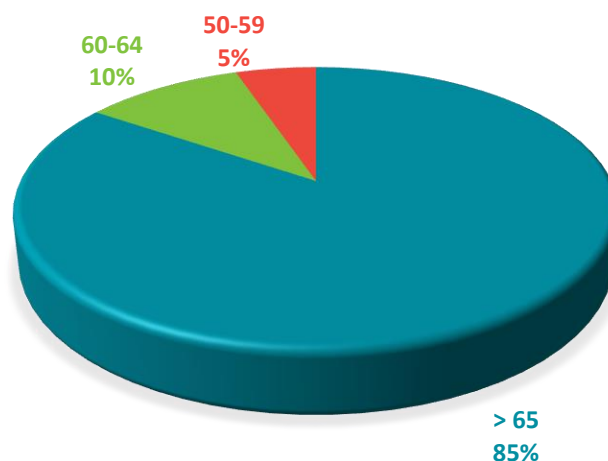
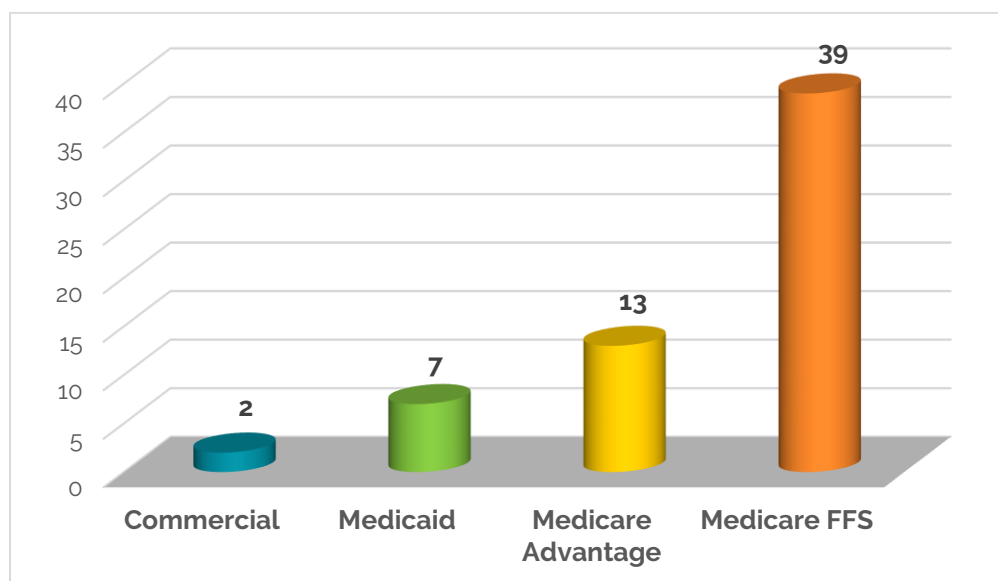
- 19720
- 19805
- 19701

COPD Participant Gender:



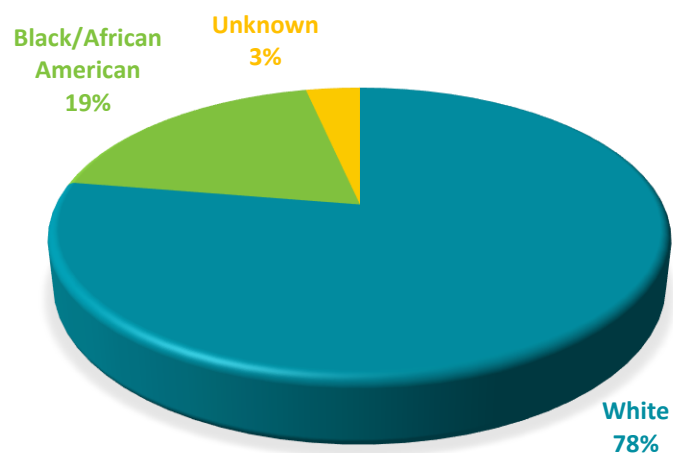
COPD Age Distribution:

Age	Member Count	Member %
≥ 65	49	84.50%
60-64	6	10.30%
50-59	3	5.20%
40-49	0	0.00%
30-39	0	0.00%
24-29	0	0.00%
20-23	0	0.00%
2-19	0	0.00%
< 2	0	0.00%
Total	58	100.00%

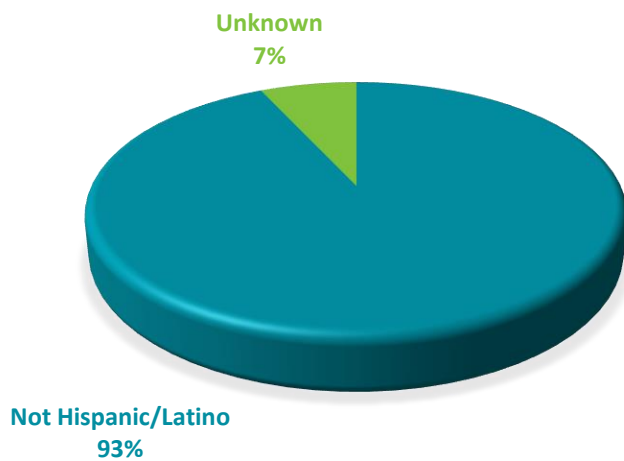
COPD Participant Member Count Line of Business:

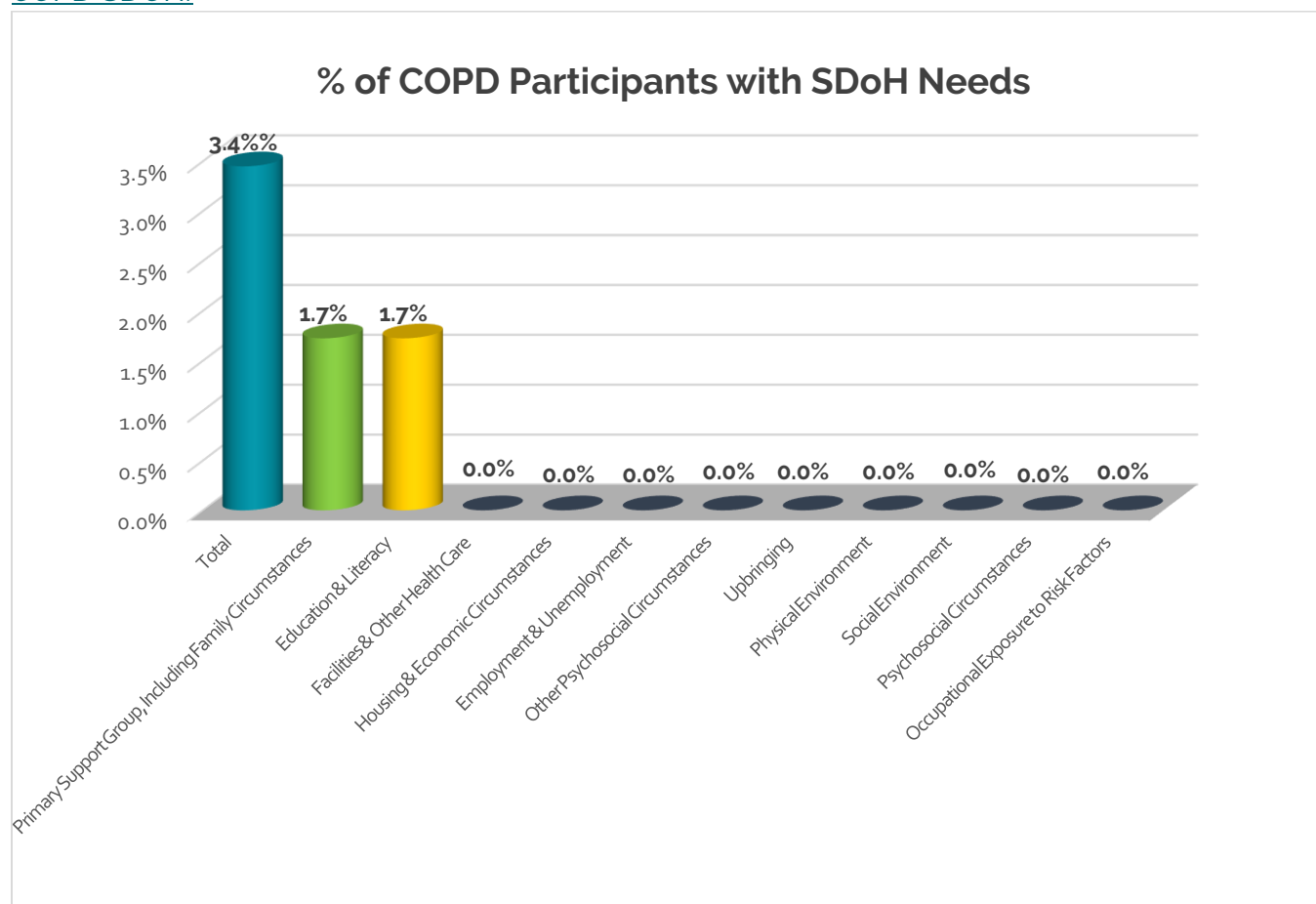
COPD Race Distribution:

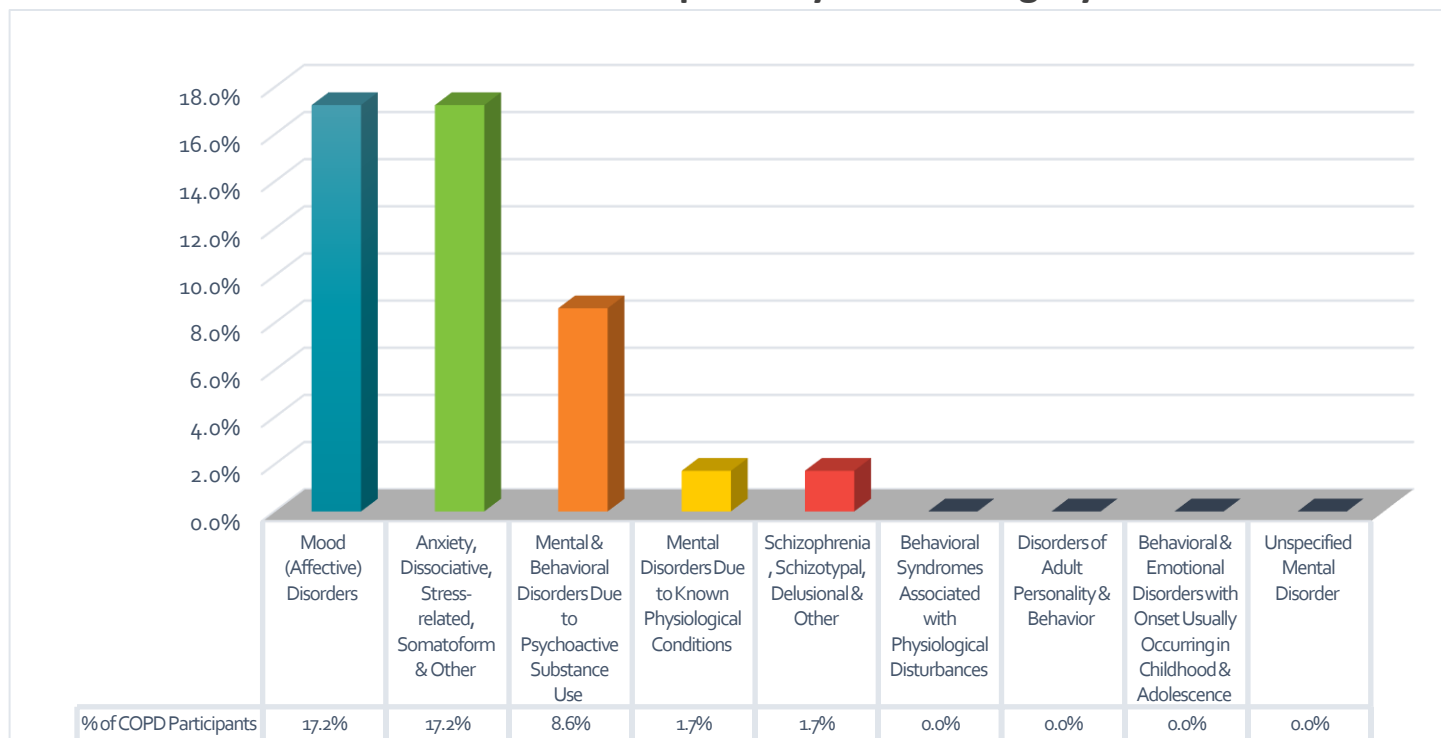
Race	Member Count	Member %
White	45	77.6%
Black/African American	11	19.0%
Unknown	2	3.4%
Other Race	0	0.0%
Asian	0	0.0%
NULL	0	0.0%
American Indian/Alaska Native	0	0.0%

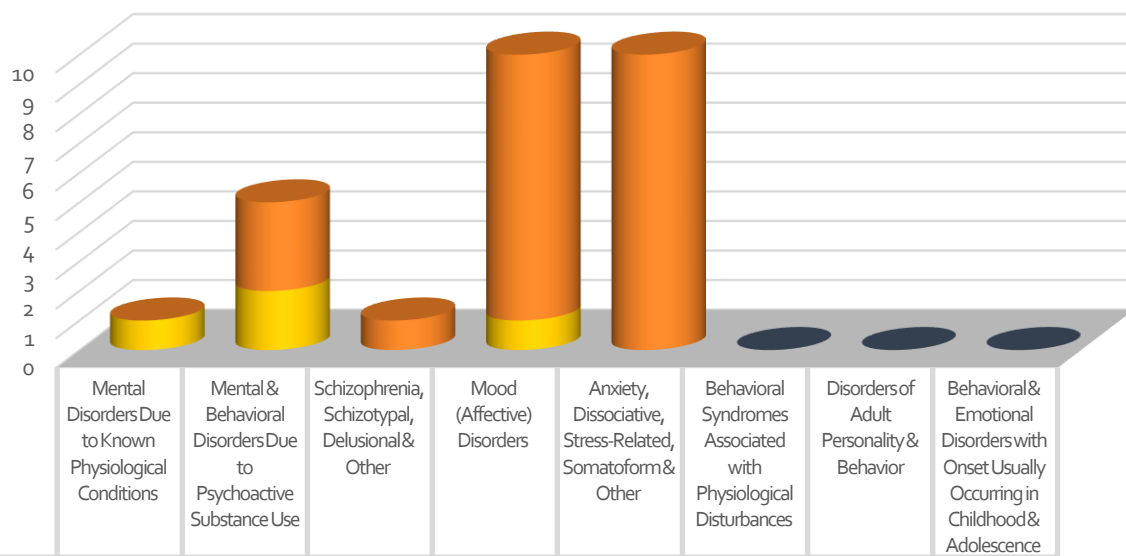
COPD Ethnicity Distribution:

Ethnicity	Member Count	Member %
Not Hispanic/Latino	54	93.10%
Unknown	4	6.90%
Hispanic/Latino	0	0.00%



COPD SDOH:COPD Disabilities:**COPD Participant Member Count with Disabilities**

COPD SPMI Distribution by Category:**% of COPD Participants by SPMI Category**

COPD SPMI by LOB**# of COPD Participants with SPMI by LOB**

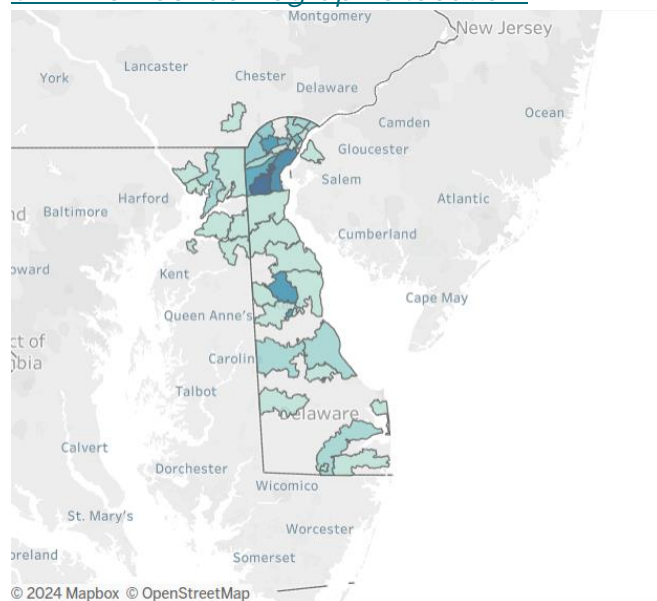
Medicare FFS	0	3	1	9	10	0	0	0
Medicare Advantage	1	2	0	1	0	0	0	0
Medicaid	0	0	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0



Congestive Heart Failure (CHF)

Denominator: 88 Unique Patients

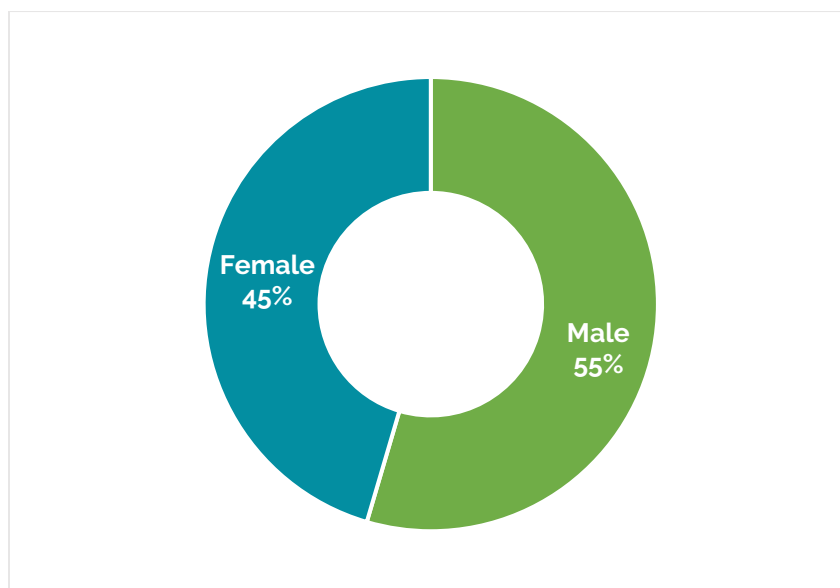
CHF Member demographic location:



Top 3 Zip Codes:

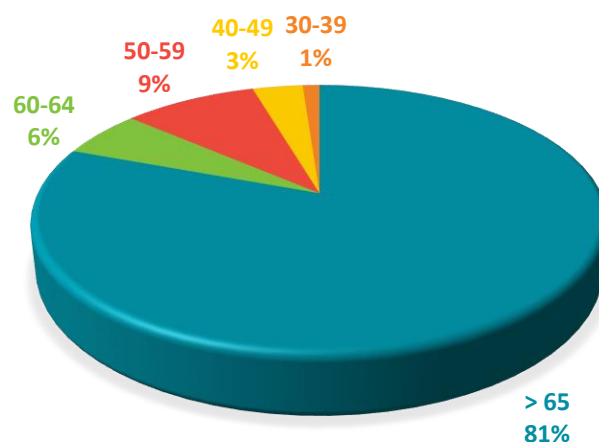
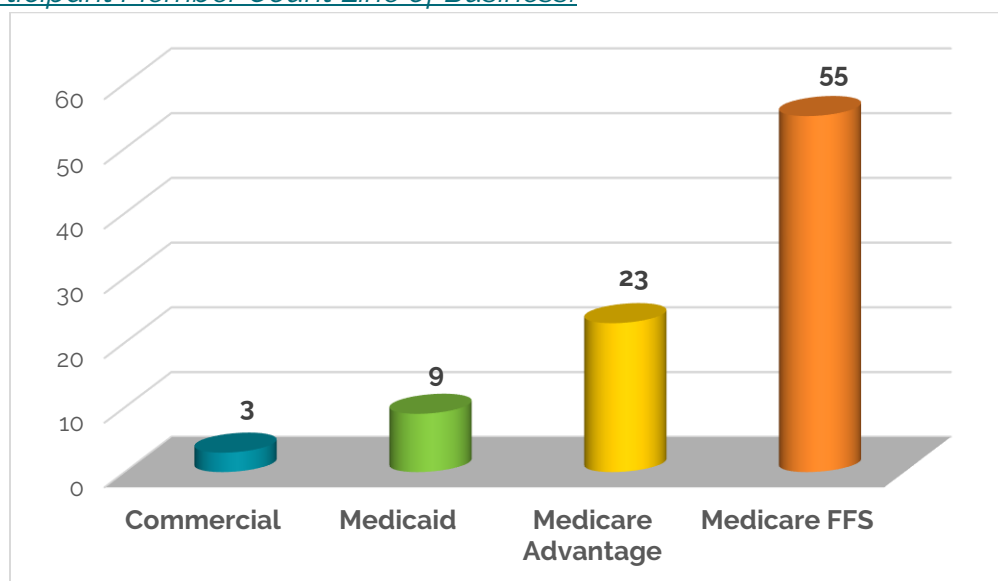
- 19701
- 19720
- 19808

CHF Participant Gender:



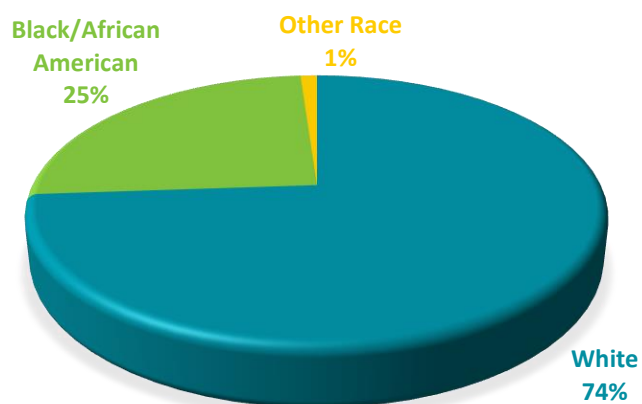
CHF Age Distribution:

Age	Member Count	Member %
≥ 65	71	80.68%
60-64	5	5.68%
50-59	8	9.09%
40-49	3	3.41%
30-39	1	1.14%
24-29	0	0.00%
20-23	0	0.00%
2-19	0	0.00%
< 2	0	0.00%
Total	88	100.00%

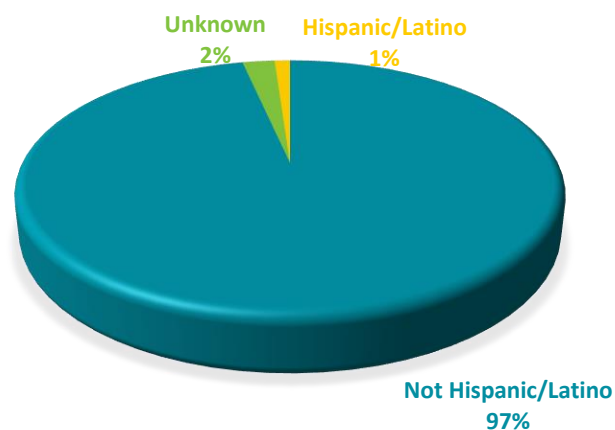
CHF Participant Member Count Line of Business:

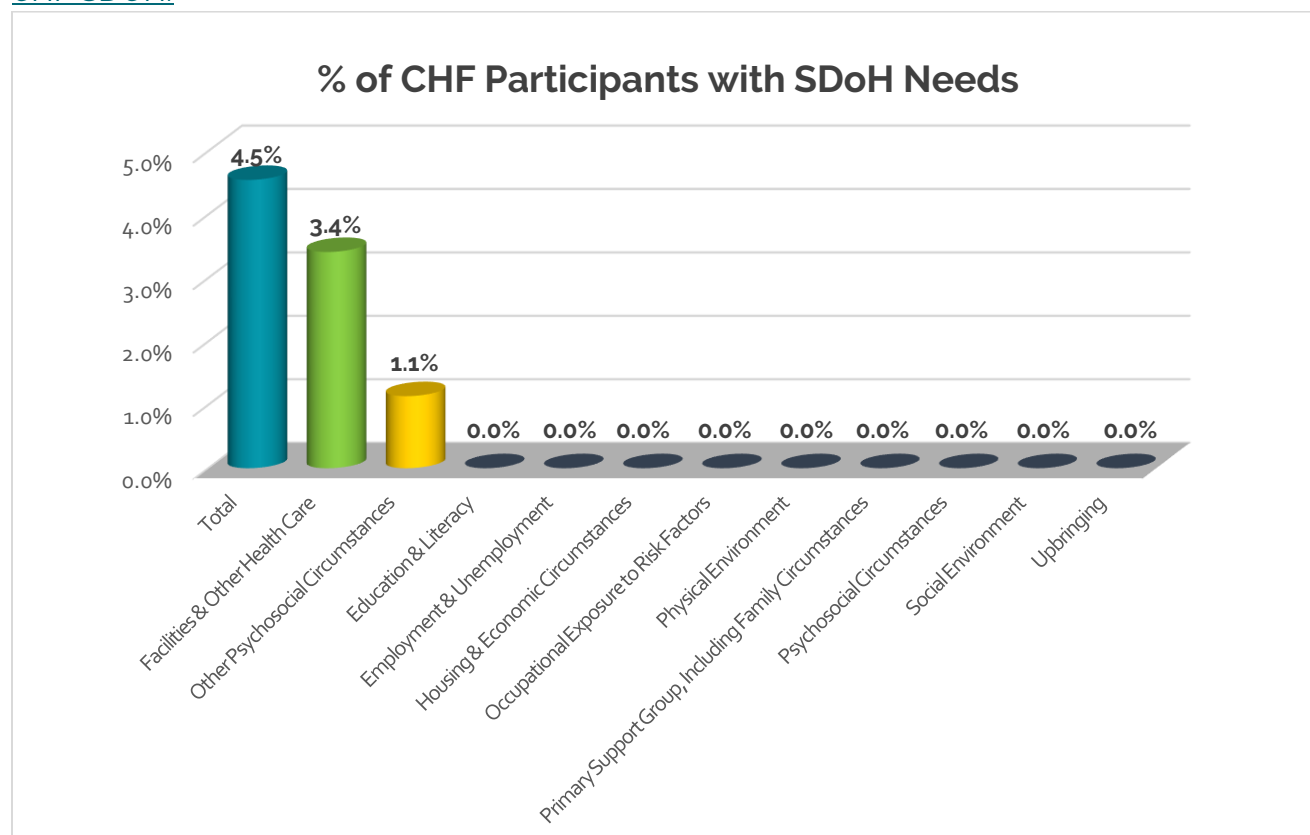
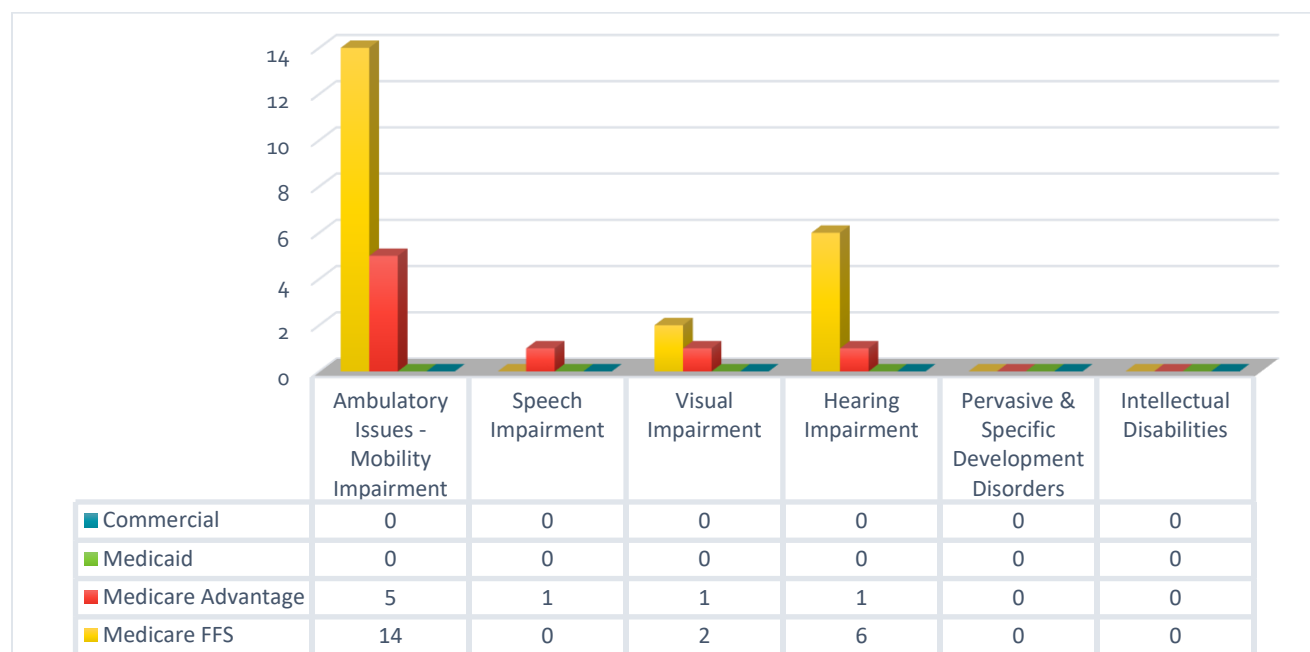
CHF Race Distribution:

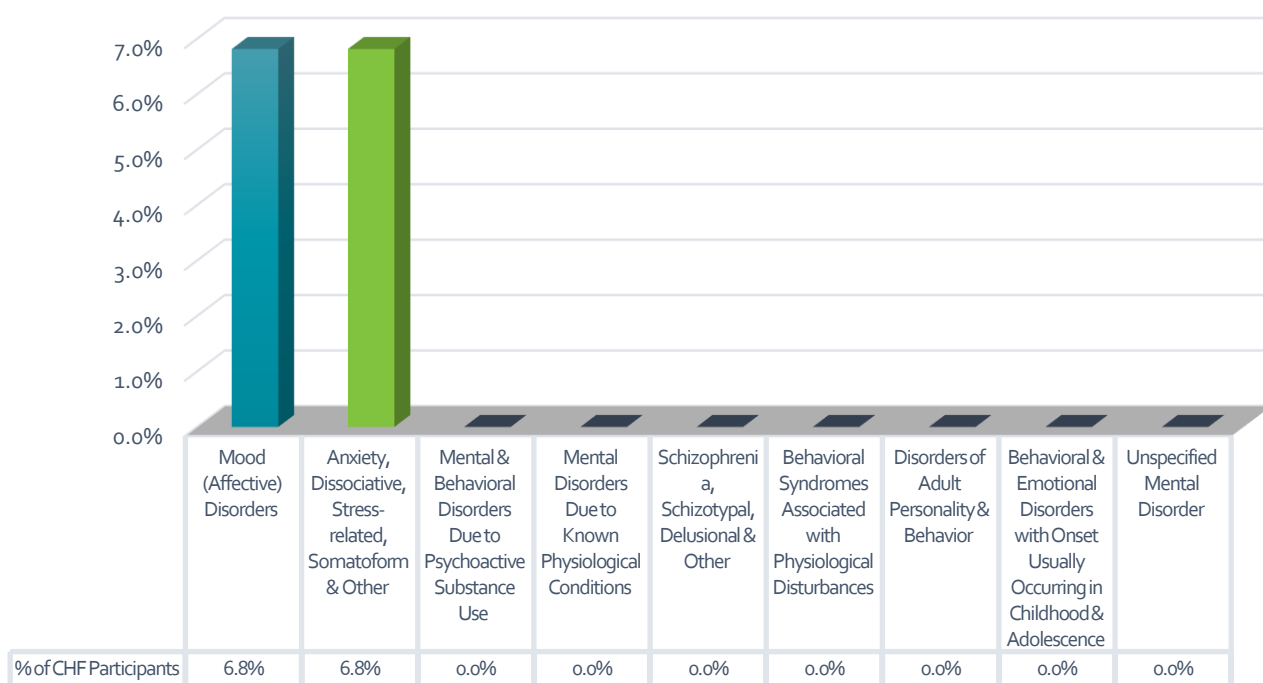
Race	Member Count	Member %
White	65	73.9%
Black/African American	22	25.0%
Other Race	1	1.1%
Unknown	0	0.0%
Asian	0	0.0%
NULL	0	0.0%
American Indian/Alaska Native	0	0.0%

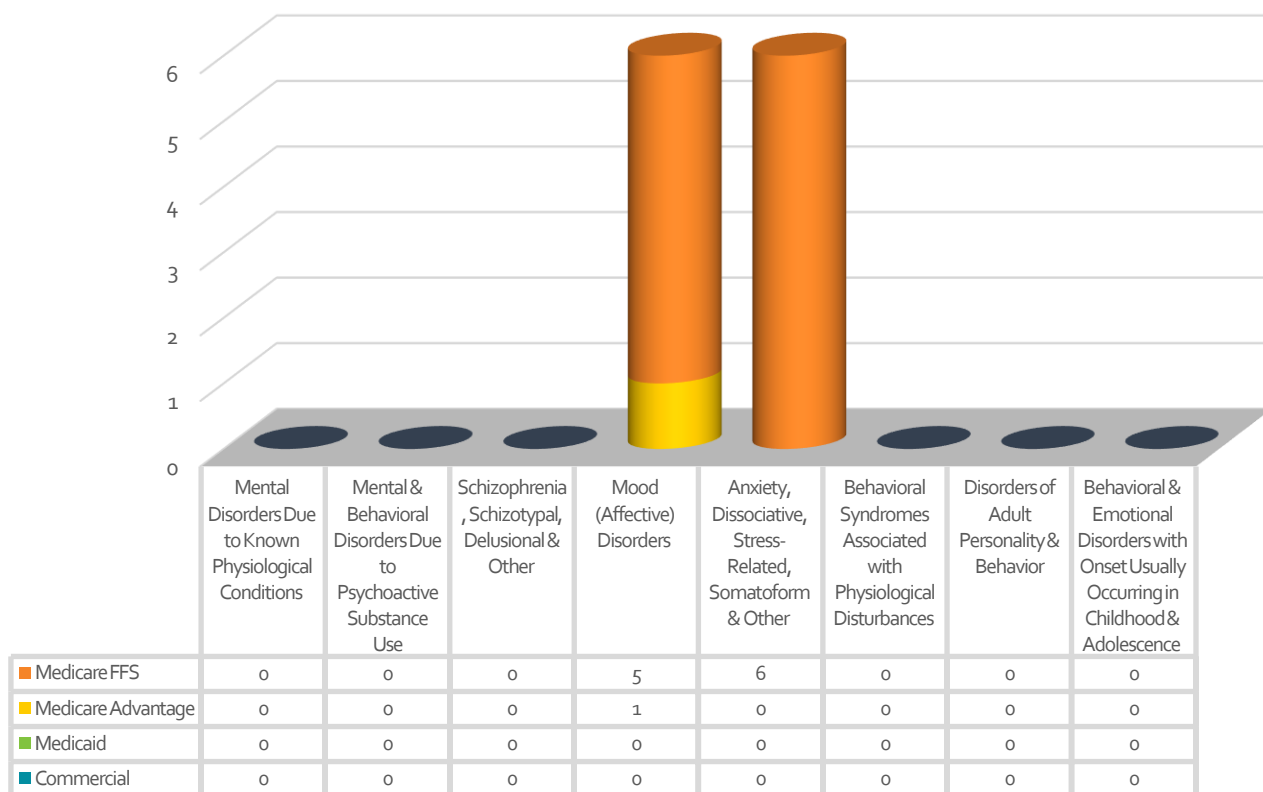
CHF Ethnicity Distribution:

Ethnicity	Member Count	Member %
Not Hispanic/Latino	85	96.60%
Unknown	2	2.30%
Hispanic/Latino	1	1.10%



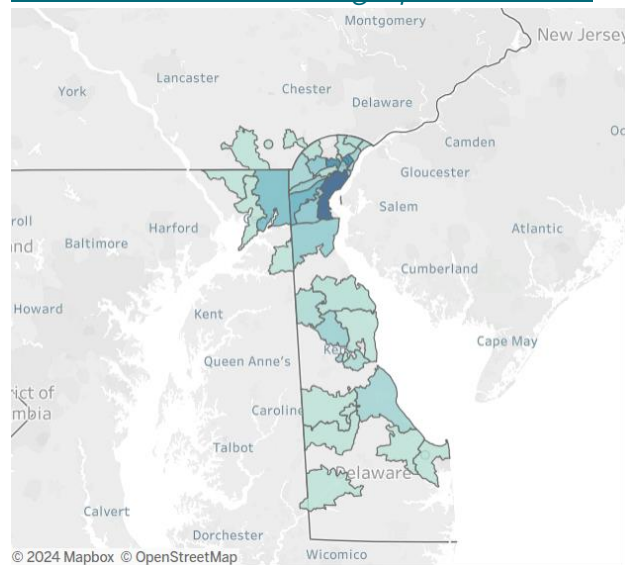
CHF SDOH:CHF Disabilities:**CHF Participant Member Count with Disabilities**

CHF SPMI Distribution:**% of CHF Participants by SPMI Category**

CHF SPMI by LOB:**# of CHF Participants with SPMI by LOB**

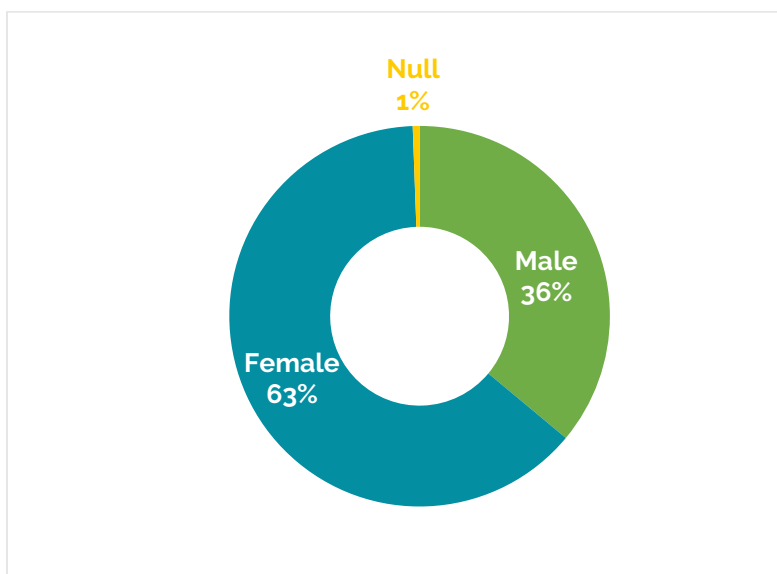
Denominator: 172 Unique Patients

Diabetes Member demographic location:



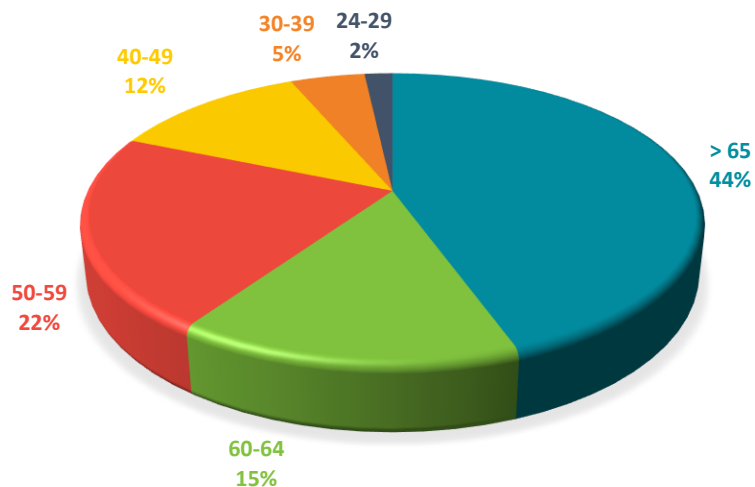
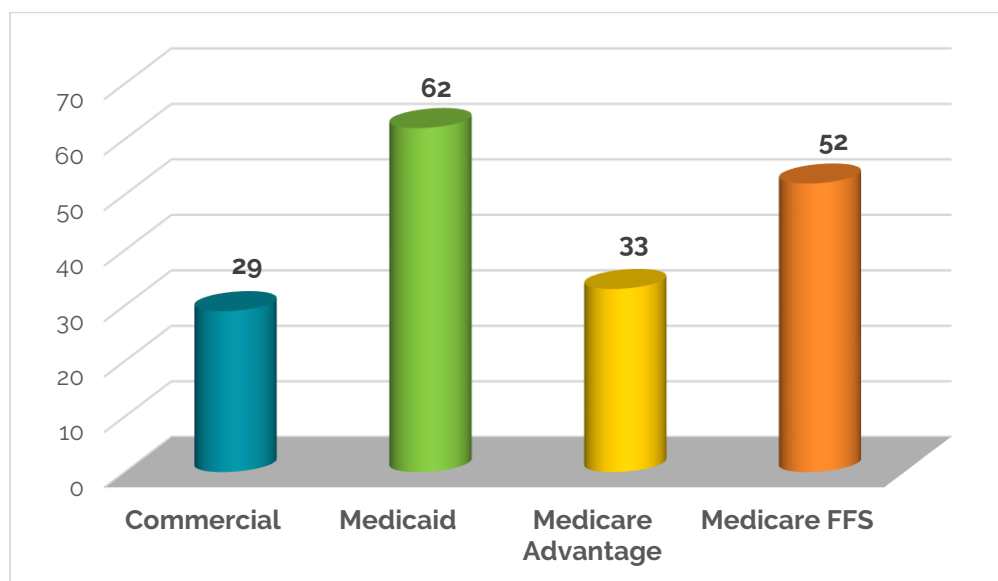
- 19720
- 19805
- 19802

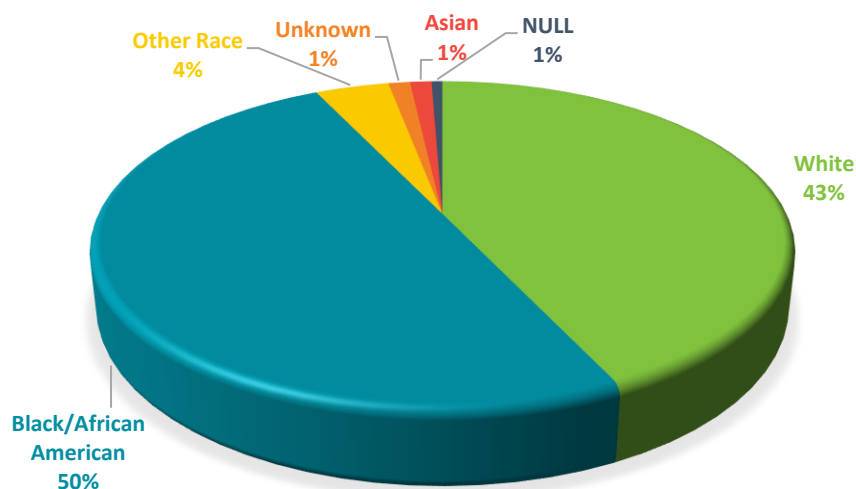
Diabetes Participant Gender:



Diabetes Age Distribution:

Age	Member Count	Member %
≥ 65	76	44.19%
60-64	26	15.12%
50-59	37	21.51%
40-49	21	12.21%
30-39	8	4.65%
24-29	3	1.74%
20-23	0	0.00%
2-19	0	0.00%
< 2	0	0.00%
Total	172	100.00%

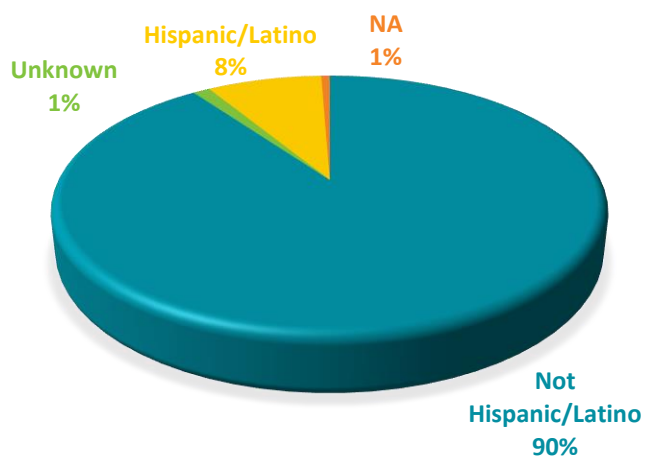
Diabetes Participant Member Count Line of Business:

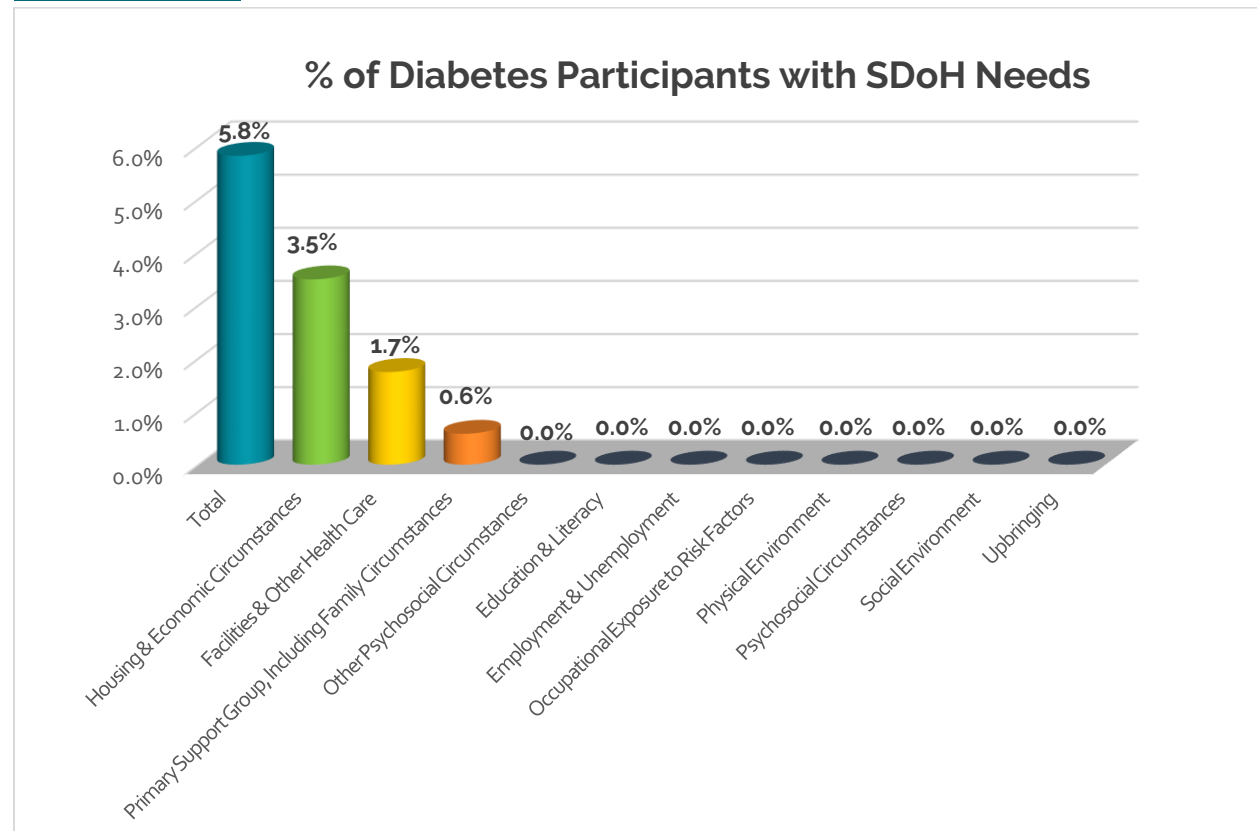
Diabetes Race Distribution:

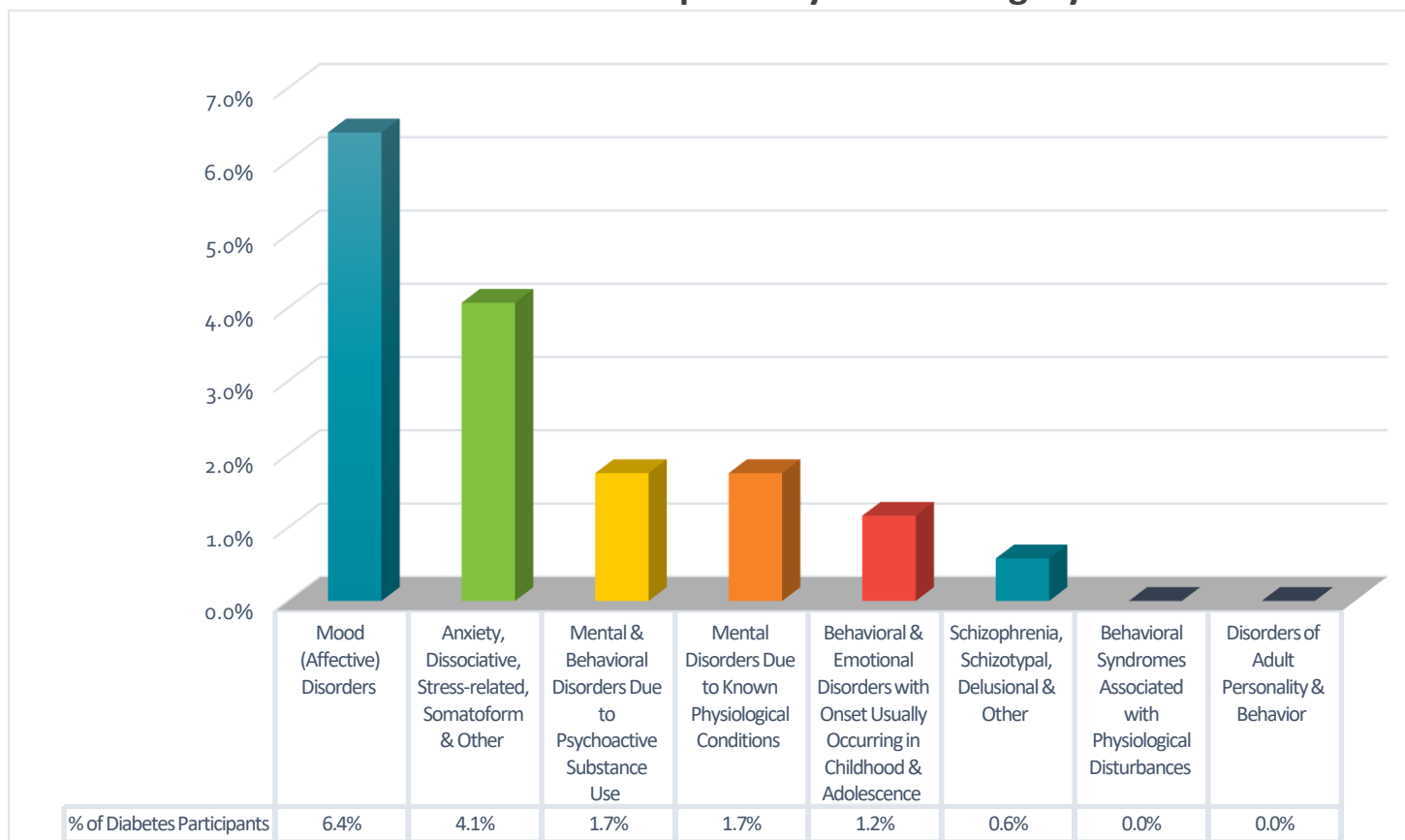
Race	Member Count	Member %
White	74	43.0%
Black/African American	86	50.0%
Other Race	7	4.1%
Unknown	2	1.2%
Asian	2	1.2%
NULL	1	0.6%
American Indian/Alaska Native	0	0.0%

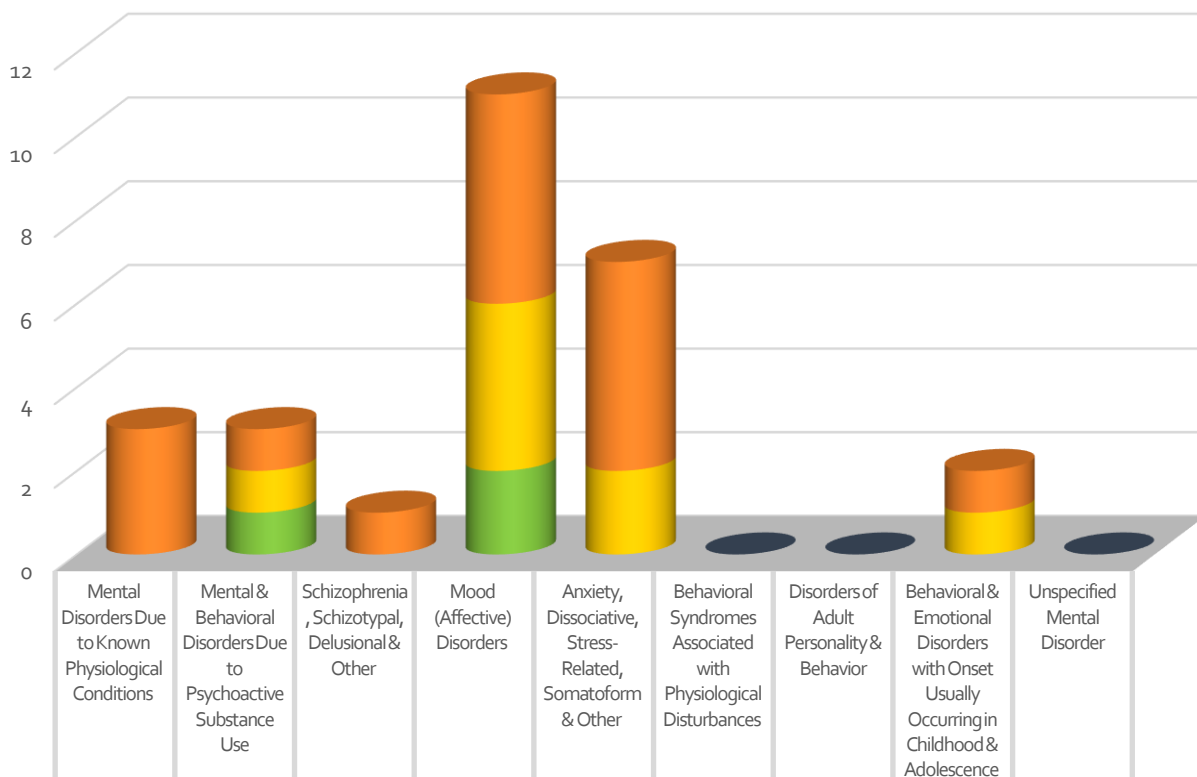
Diabetes Ethnicity Distribution:

Ethnicity	Member Count	Member %
Not Hispanic/Latino	155	90.10%
Unknown	2	1.20%
Hispanic/Latino	14	8.10%
NA	1	0.60%



Diabetes SDOH:

Diabetes Disabilities:**Diabetes Participant Member Count with Disabilities**Diabetes SPMI Distribution:**% of Diabetes Participants by SPMI Category**

Diabetes SPMI by LOB:**# of Diabetes Participants with SPMI by LOB**

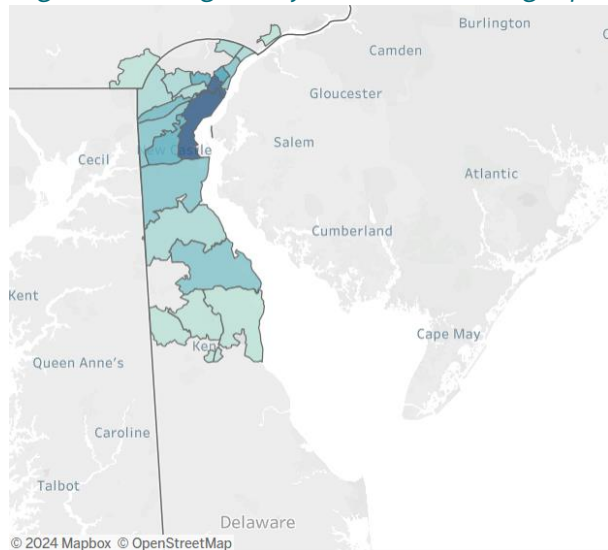
Medicare FFS	3	1	1	5	5	0	0	1	0
Medicare Advantage	0	1	0	4	2	0	0	1	0
Medicaid	0	1	0	2	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	0



High Risk Pregnancy Program

Denominator: 83 Unique Patients

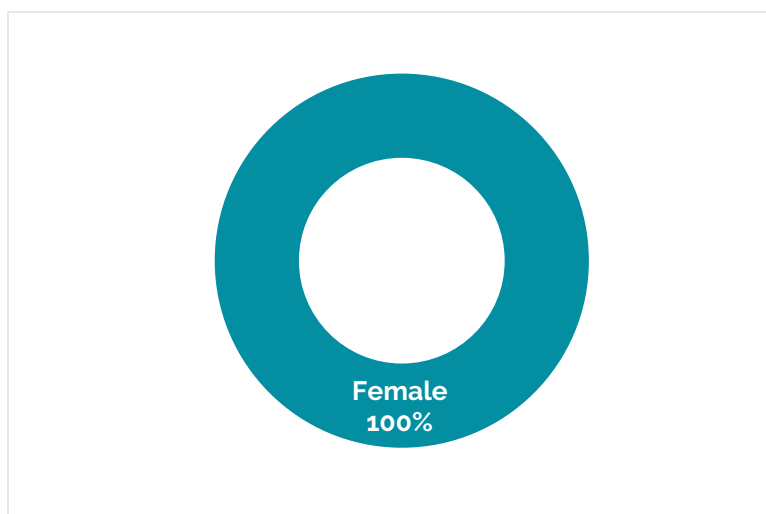
High-Risk Pregnancy Member demographic location:



Top 3 Zip Codes:

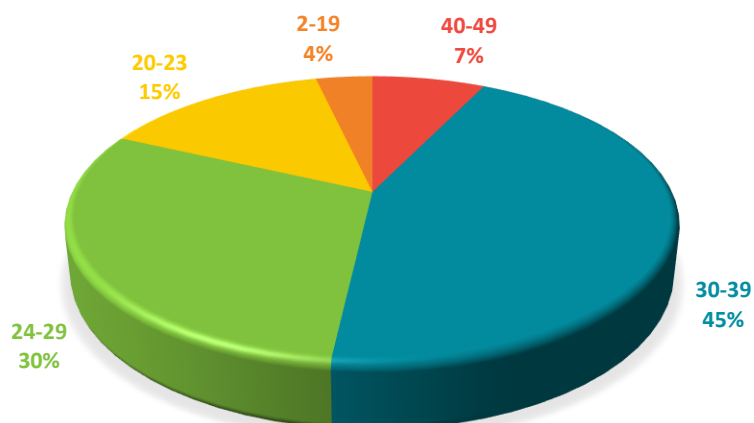
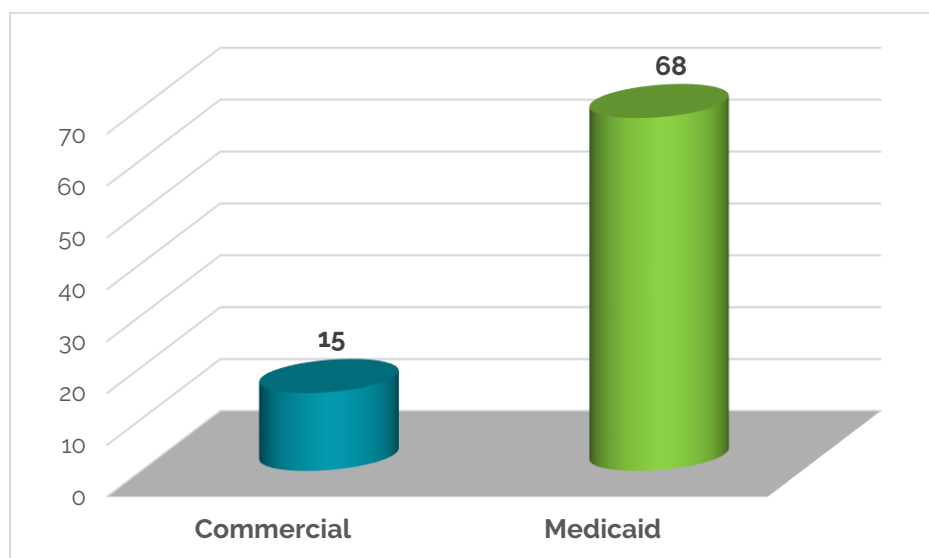
- 19801
- 19720
- 19802

High-Risk Pregnancy Participant Gender:

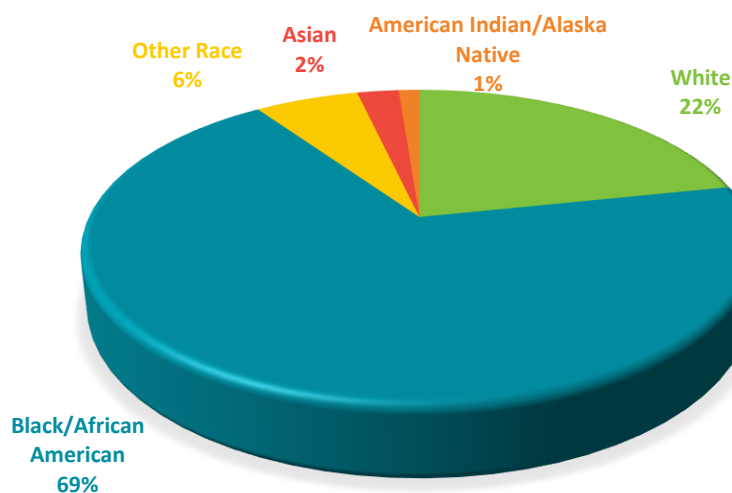


High-Risk Pregnancy Age Distribution:

Age	Member Count	Member %
≥ 65	0	0.00%
60-64	0	0.00%
50-59	0	0.00%
40-49	6	7.20%
30-39	37	44.60%
24-29	25	30.10%
20-23	12	14.50%
2-19	3	3.60%
< 2	0	0.00%
Total	83	100.00%

High-Risk Pregnancy Participant Member Count Line of Business:

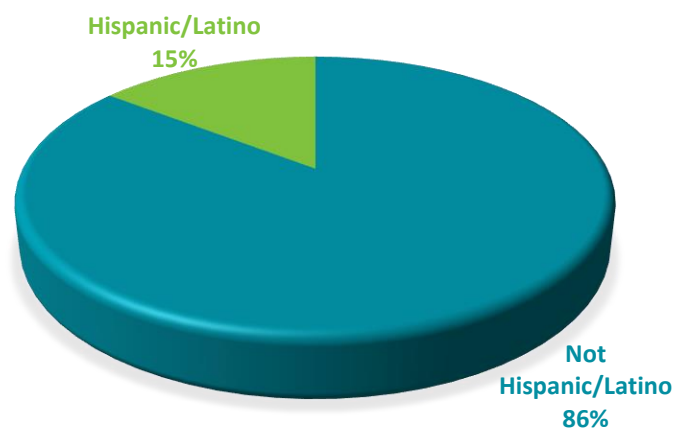
High-Risk Pregnancy Race Distribution:



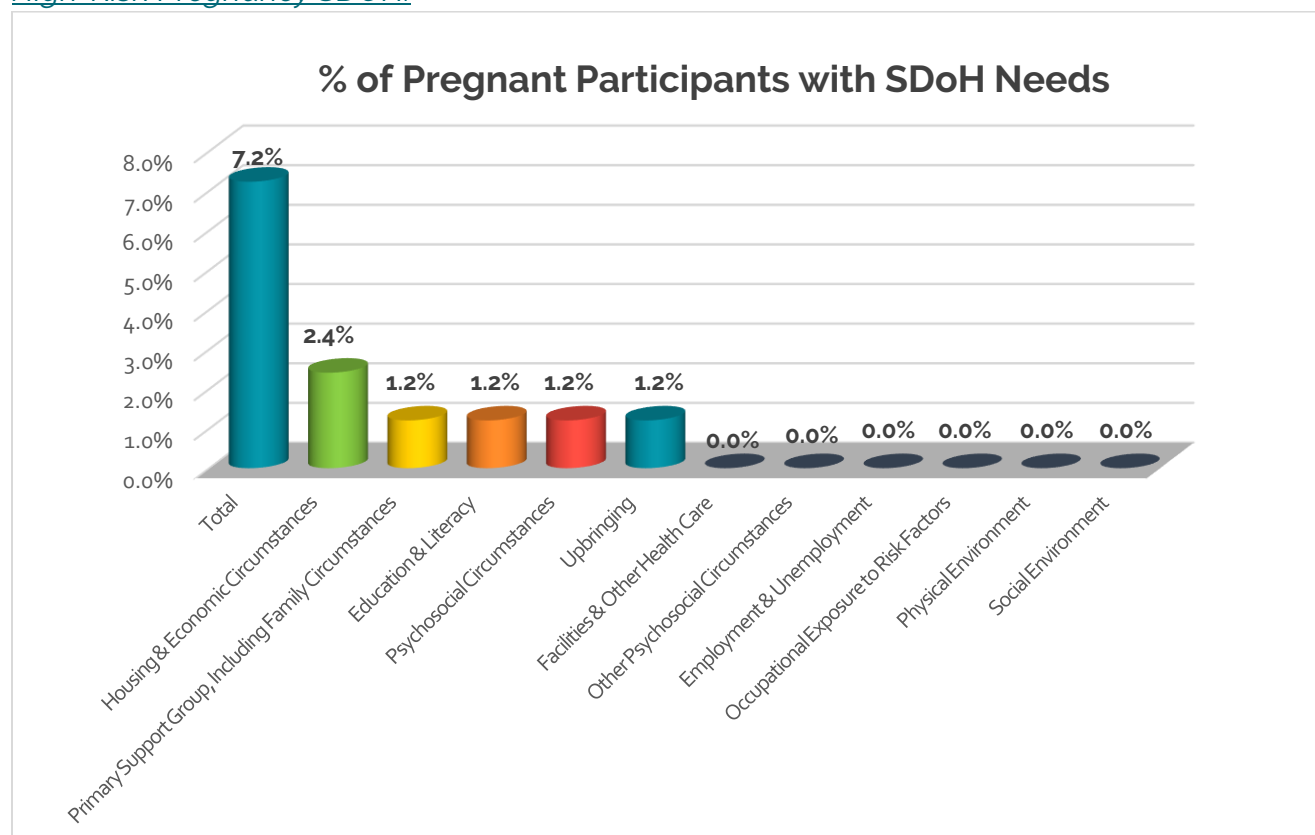
Race	Member Count	Member %
White	18	21.7%
Black/African American	57	68.7%
Other Race	5	6.0%
Asian	2	2.4%
American Indian/Alaska Native	1	1.2%

High-Risk Pregnancy Ethnicity Distribution:

Ethnicity	Member Count	Member %
Not Hispanic/Latino	71	85.50%
Hispanic/Latino	12	14.50%

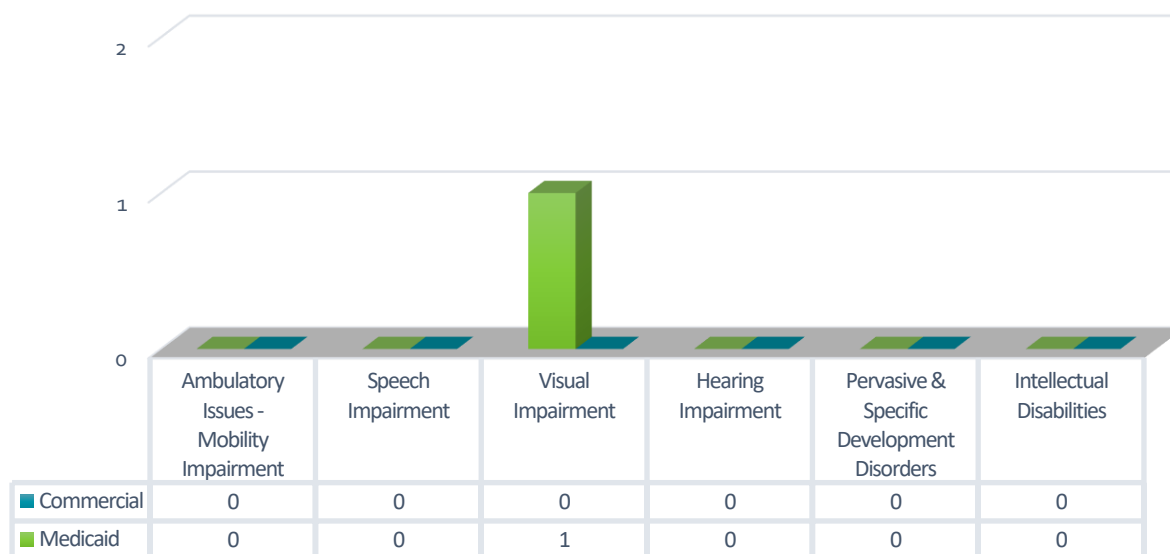


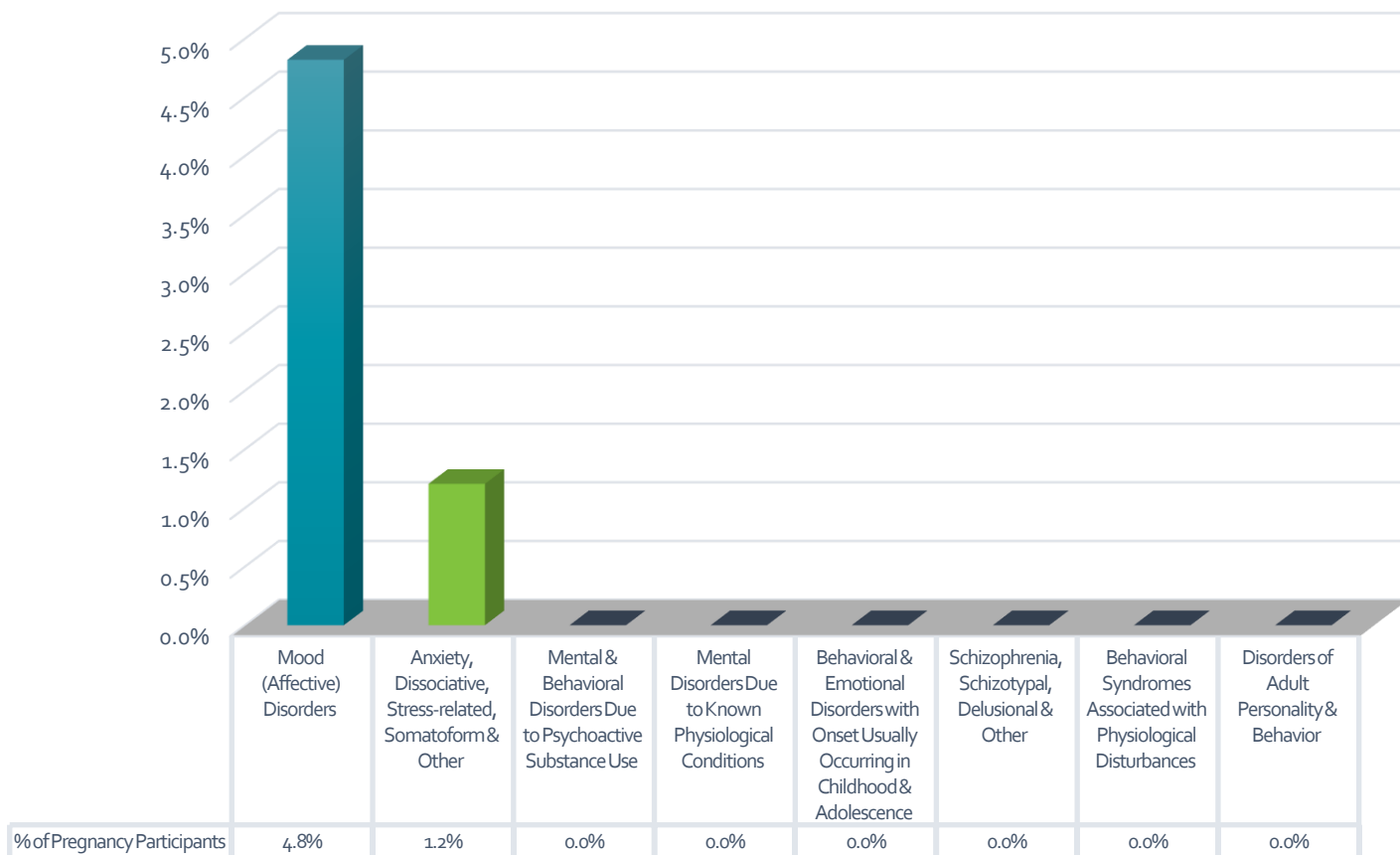
High-Risk Pregnancy SDOH:

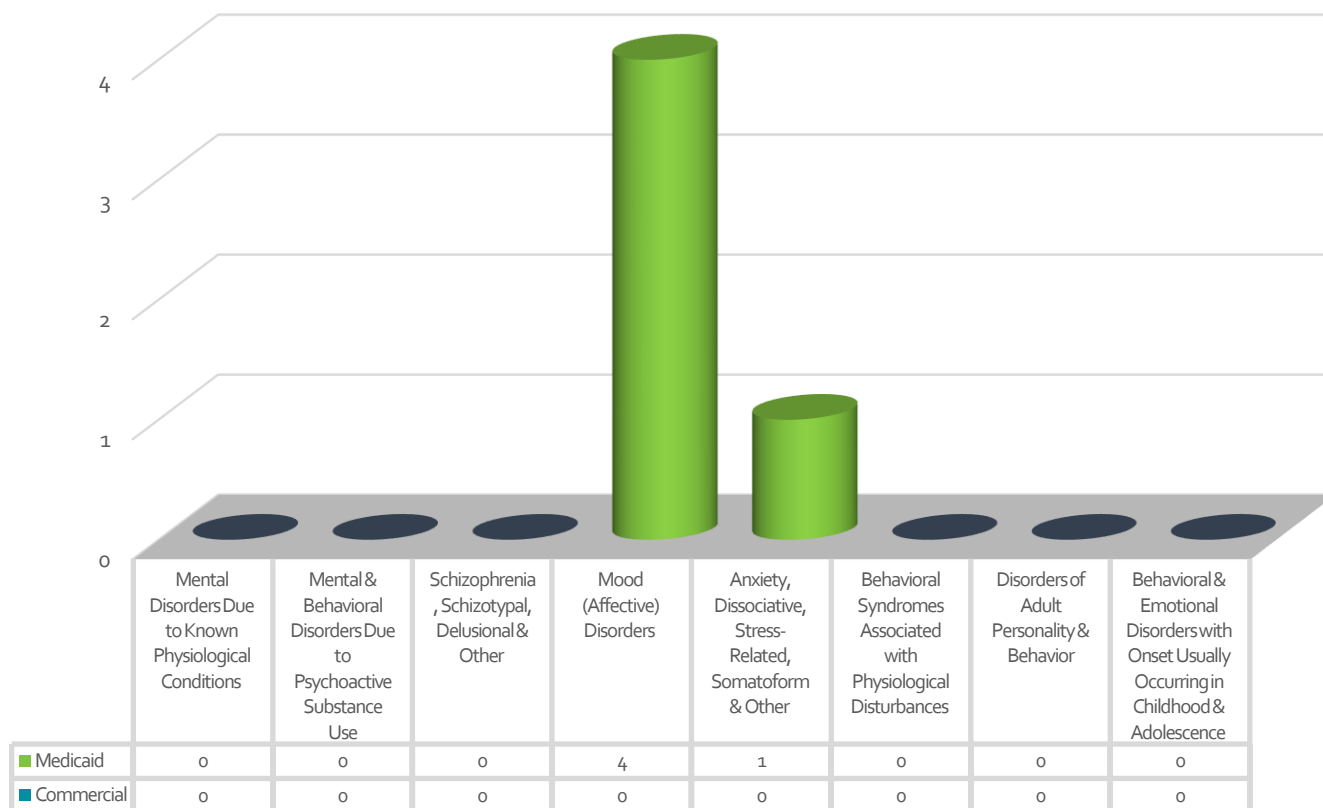


High-Risk Pregnancy Disabilities:

Pregnant Participant Member Count with Disabilities



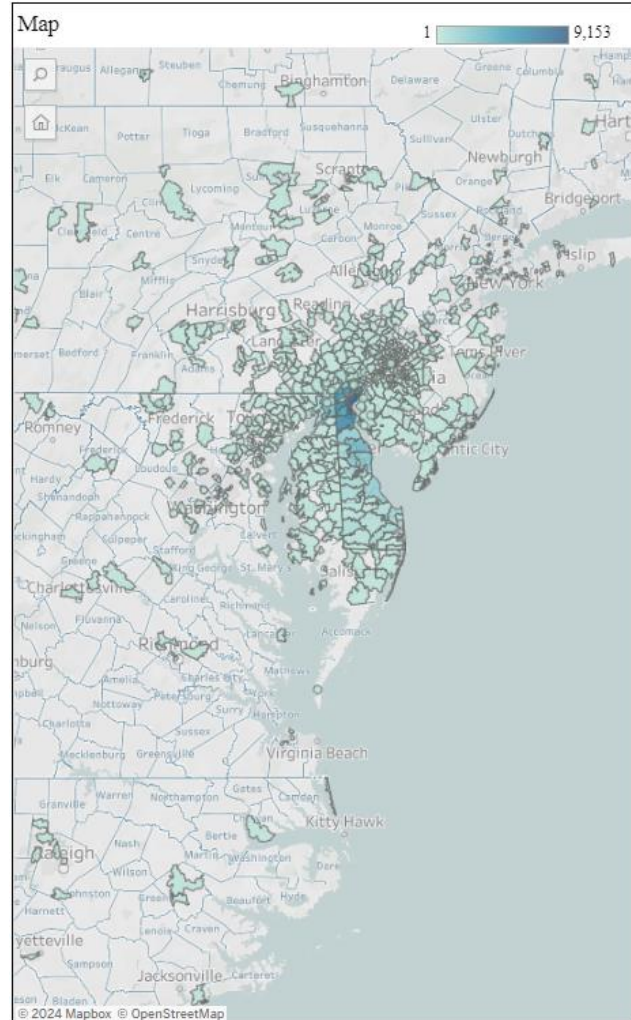
High-Risk Pregnancy SPMI Distribution:**% of Pregnant Participants by SPMI Category**

High-Risk Pregnancy SPMI by LOB:**# of Pregnant Participants with SPMI by LOB**

Population Assessment Heat Map

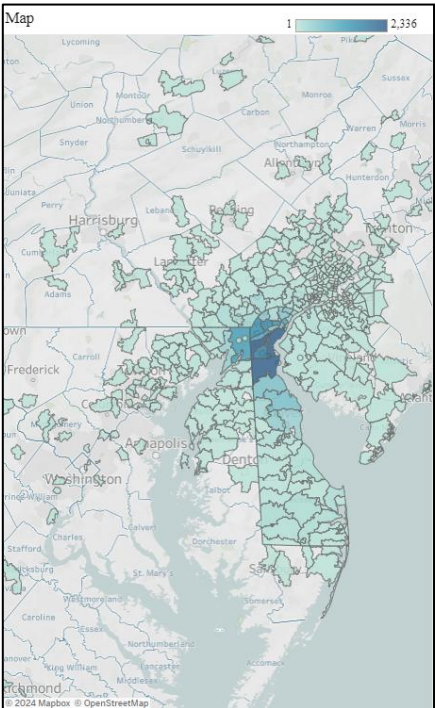
Total Population

Top 20 Cities	
City	Count
Wilmington	29,249
Newark	15,864
New Castle	8,930
Middletown	6,451
Dover	4,630
Bear	4,559
Smyrna	3,215
Elkton	2,855
Claymont	2,152
Hockessin	2,118
Milford	1,867
Townsend	1,863
Lewes	1,126
Millsboro	987
North East	971
Clayton	938
Felton	917
Seaford	868
Harrington	801
Magnolia	719

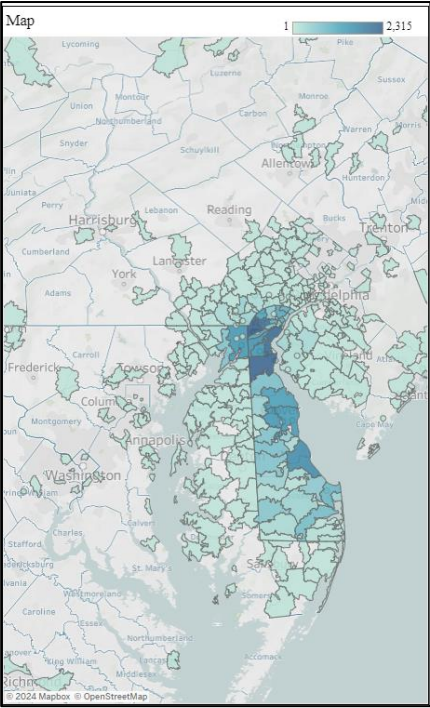


By Payer

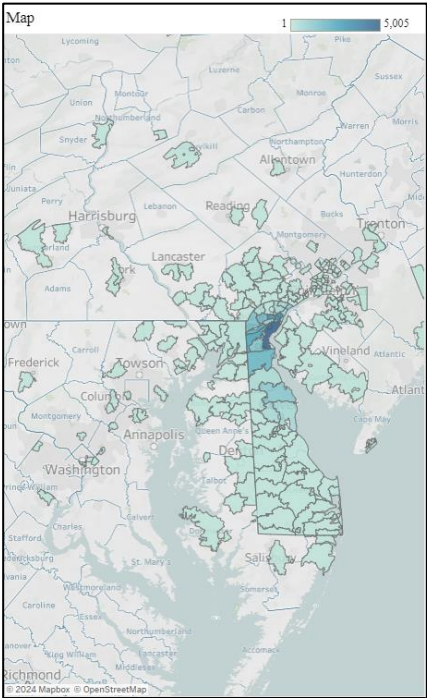
Commercial



Medicare



Medicaid



Executive Summary

Key Findings of Total Population

The 2023 CareVio Population Assessment includes an analysis of CareVio member and regional data, and comparison to 2022 where applicable. This analysis focused on targeted populations, subpopulations, disease management programs and Social Determinants of Health (SDOH). Data specific to Delaware (DE) was utilized for comparison purposes as the CareVio population primarily resides in the state of Delaware.

The total population for those within the entire CareVio population for 2023 was 109,283 members, a decrease of approximately 15,000 compared to 2022. This decrease in the total member population was primarily due to contractual changes within the CareVio business in 2023. These contractual changes resulted in a lower percentage of members with a commercial payer and a higher percentage of members in the Medicaid, Medicare FFS, and Medicare Advantage payer groups. Within the CareVio population, there were more females than males. The most populated age group was ≥65 years of age, due to the high representation of members in the Medicare FFS and Medicare Advantage attributed populations. The second most populated age group was 2-19 year old, similar to the data reported in 2022. Most CareVio members identified their race as White, while the second most identified race was African American. In the Medicaid population, most CareVio members identified their race as African American, while the Commercial, Medicare Advantage and Medicare FFS populations identified White as the predominant race. Non-Hispanic was the most frequently reported ethnicity among the CareVio population. The ethnicity and primary language of the CareVio population closely aligned with the demographic data for the state of Delaware. There was a slightly higher number of Spanish speaking CareVio members in 2023 as compared to the data reported in 2022.

In 2023, there were minimal changes in the race of the CareVio population from the data reported in 2022. CareVio's total population is approximately 25% Black or African American. Within the Black or African American CareVio population, approximately 54% attribute to Medicaid. This subset of the population mainly resides in zip codes in Northern New Castle County (19720, 19801, 19802, 19805) which have a high level of SDOH needs. A significant number of individuals with a Medicaid payer reside in these zip codes. Having health care insurance coverage under Medicaid is an indicator of economic well-being²². CareVio is committed to promote Health Equity and minimize racial bias in its programming. In 2024, CareVio will focus on implementing strategies to increase the number and retention of participants identified with disparities in its programs. As noted by Nescott, Barlow and Perez-Rivera²², health inequities among Black or African Americans, who



attribute to Medicaid, reside in SDOH prevalent zip codes, also lack access to resources, hence attributing to poorer health outcomes.

Geocoding

The geocoding heat map shows population density by zip code, whereas the member count chart showed population within cities. The geocoding heat maps for the last three years of data are consistent, including that the most populated zip code of the CareVio population is 19720, located in New Castle County. The population in this zip code accounts for 8.3% of the CareVio population. The city of New Castle (zip code 19720) has a poverty rate of 9.9%, based on data from the Delaware Department of Health and Social Services⁹ and represents 55% of the Medicaid beneficiaries of the total CareVio population. Additionally, a significant portion of the CareVio African American population reside in the zip code of 19720. However, overall, the majority of African American CareVio members reside in zip codes in the city of Wilmington.

The commercial population predominantly resides in the northern part of the state of Delaware where the businesses associated with commercial insurance are located. However, the residential location of these members has continued to expand and increase in population in the neighboring states. Most commercially insured members reside in the zip codes of 19709 (member count: 2,253), 19702 (member count: 2,336) and 19720 (member count: 2,227), located in New Castle County. Interestingly, these three zip codes are geographically located beside each other yet vary with in the prevalence of poverty and deprivation⁹.

The Medicaid population primarily resides within the urban zip codes, which are among the highest areas of poverty in the state. The city of Wilmington zip codes including 19801, 19802 and 19805 as well as the zip code of 19720 (city of New Castle) represent the highest Medicaid population in the state. The total CareVio population and Medicaid population in the zip codes listed above are nearly identical to the 2022 data; they represent 21% of the total population and 61% are attributed to Medicaid.

The Medicare Advantage population resides primarily in New Castle County, neighboring Cecil county in Maryland and Eastern Sussex County. Additionally, the Medicare FFS members reside in all three counties, each with more densely populated areas than others. Interestingly, the Medicare FFS members primarily reside in associated zip codes that are less identified with poverty and deprivation prevalence.



Top 20 Physical Health Conditions in 2023

The top 20 physical health conditions were the same as those reported in 2022 with small differences in the percent of CareVio member claims. Within each health condition, the most frequent specific condition remained the same.

Similar to 2022, Preventative care remained the most frequent condition across the claims for all insurance payers. In 2023, there were significantly fewer claims in the Infectious Disease category across all payers, as compared with 2022. This change is almost certainly due to the decrease in COVID infections between 2023 and 2022⁸. In 2023, except for the Infectious Disease category, there was a higher percentage of members with a claim in every Top 20 Physical Health Condition Category for the total population, as compared with 2022.

In 2023 and similar to 2022, for members with Medicare Advantage or Medicare FFS, the second most frequent condition was 'Other Cardiovascular Disorder'. Approximately half of both the Medicare Advantage and Medicare FFS population had a claim for 'Other Cardiovascular Disorder'. The most frequent ICD-10 reported claims for 'Other Cardiovascular Disorder' was for 'Essential (Primary) Hypertension' and 'Chest Pain'. The second most frequent condition for both Medicare Advantage and Medicare FFS was for 'Eye Disorders'. The three most frequently ICD-10 reported claims within this category were all related to cataracts.

Claims for Infectious Disease were significantly higher in the Medicare FFS population (47%) than in the Medicare Advantage population (25%). For the Medicare FFS population, the most frequent ICD-10 reported claims under this condition were for contact with and (suspected) exposure to COVID-19, urinary tract infection, and tinea unguium.

The second most frequent claim for the Commercial population was for 'Acute Respiratory Infection'. The most frequent ICD-10 reported claims under this condition were for acute pharyngitis, acute upper respiratory infection, and streptococcal pharyngitis. This frequent claim diagnosis can almost directly be a result of the high prevalence of the Commercial population attributing to the age group of 2-19.

Similar to 2022, in 2023, members covered under Medicaid had significantly fewer claims for Preventative Care than all other payers. According to a meta-analysis conducted by Hsiang, et al¹⁵, Medicaid patients are known to have reduced access to care compared to those patients with a private insurer. They are more likely to be excluded from the practice of their choice and may need to make considerably more effort to schedule an appointment. Some providers do not accept Medicaid insurance or limit the number of new Medicaid patients in their practices¹⁵. The findings from this Population Assessment and the literature represent an opportunity



for CareVio to ensure that members with Medicaid have a primary care clinician and seek/receive appropriate preventative care.

The second most frequent claim for the Medicaid population was for Infectious Disease. The most frequently ICD-10 reported claims under this condition were for Contact with and (Suspected) Exposure to COVID-19, urinary tract infection, and sepsis.

For both 2022 and 2023, within the age group of 2-19 years, the most frequent claim was for Preventive Care. In 2023, the second most frequent claim was for Acute Upper Respiratory Infections; in 2022, Infectious Disease had the second most frequent claims, again most likely due to COVID-19. In 2023, the most frequent ICD-10 reported claims under Acute Respiratory Infections were for acute upper respiratory infection unspecified, acute pharyngitis, and streptococcal pharyngitis. The third and fourth most frequent claims were for ENT disorders and Infectious Disease. The most frequent ICD-10 reported claims under these conditions were for otitis media, contact with and (suspected) exposure to COVID-19, and viral infection.

Social Determinants of Health

Social Determinants of Health data that accurately reflects a specific population can be difficult to obtain. As noted by He, et al.,¹³ "potential challenges and barriers to the low documenting rate of SDOH in electronic health record systems include lack of integration into clinical workflows, lack of incentives for SDOH data collection, and lack of training and tools for clinicians to derive actionable insights for decision making." SDOH data for this report was collected from SDOH Category data Z-codes in claims and from Soarian (the CCHS billing system). These two data sources were the most readily accessible to CareVio. The ChristianaCare Community Health Needs Assessment¹ provided additional background information on improved innovative methods to capture SDOH data self-reported from patients.

Approximately 1.4% of the CareVio total population reported at least one SDOH need. The SDOH categories "Housing and Economic Circumstances" and "Facilities and other Health Care" were the most frequently reported need and were reported equally. Both of these SDOH categories were reported at a higher rate in 2023 than in 2022. The second most frequent SDOH need was "Primary Support Group, Including Family Circumstances."

Several other SDOH categories were reported at a higher rate in 2023 than in 2022: Employment & Unemployment, Other Psychosocial Circumstances, and Education and Literacy. Occupational Exposure to Risk Factors was reported in 2022 but not in 2023.

The percent of the total population with a reported SDOH need increased for all payers in 2023 vs. 2022, with the Commercial and Medicaid populations having the largest increases. For those members who reported an SDOH need, 52% were



White, 43% were Black/African American, and 97% spoke English. Those members who identified as Black / African American reported significantly more SDOH needs for Housing & Economic Circumstances, Primary Support Group, including Family Circumstances, and Other Psychosocial Circumstances than those who identified as White.

Similar to 2022, in 2023, of the total number of reported SDOH, 53.1% were reported by the Medicaid population. For the Medicaid population who reported an SDOH, 54% identified as Black / African American and 40% identified as White. Also, similar to 2022, in 2023, the SDOH need most frequently reported by the Medicaid population was "Housing and Economic Circumstances."

In summary, in 2023, a higher percentage of members reported at least one SDOH need than in 2022. SDOH needs increased across all payers, with Commercial and Medicaid having the largest increases from 2022. According to the Delaware National Low Income Housing Coalition²¹, housing instability remains a serious social issue in Delaware as shown in the higher reporting of Housing & Economic Circumstances as an SDOH need. Across Delaware, there is a shortage of rental homes that are affordable and available to extremely low income households. Many of these households spend more than half of their income on housing and sacrifice other necessities such as health care, healthy food, etc.²¹ In addition, the increased reporting of "Facilities & Other Health Care" as an SDOH need may reflect an issue with access to care. In Delaware, Sabine & Gibbs²⁵ noted that the Health Resources & Services Administration (HRSA) recognizes that there are 37 Health Professional Shortage Areas among the primary care, dental, and mental health disciplines. The shortage of healthcare professionals, exacerbated by maldistribution, poses a significant challenge to achieving health equity. Vulnerable populations, bear a disproportionate burden of these shortages which serve to further widen the gap of existing health disparities.²⁵

Disabilities

In 2023, there was a substantial change in the payers for the commercial population that CareVio served. The Commercial payers restricted their provision of some disability and behavioral health claims to CareVio. Thus, the data below is an incomplete representation of the disability and behavioral health / SPMI claims for the commercial population.

In 2023, 7% of the total CareVio population had at least one reported disability related claim, which is an increase from the 6% reported in 2022. It is important to note, that the percent of disability claims increased even though CareVio did not receive a significant number of these claims for the commercial population. The most frequently reported disabilities were "Hearing Impairment" and "Ambulatory Issues/Mobility Impairment." These reported disabilities are not unexpected, given



the high percentage of members in the CareVio population who are ≥ 65 years of age. Members may have more than one disability reported.

Severe and Persistent Mental Illness

As mentioned in the Disability section above, the data for mental illness and behavioral health claims is incomplete for the Commercial population. Thus, the percent of the total CareVio population and percent of the Commercial population with a claim for Severe and Persistent Mental Illness (SPMI) is artificially low for every condition. Thus, the comparison of 2023 data with 2022 data is not meaningful for these two populations.

It is well accepted that individuals with serious mental illness have poorer health outcomes than the rest of the population, partially due to inequitable access to quality health services. These individuals tend to have a shorter life expectancy with worse physical health but receive fewer services and lower quality of care than individuals without a serious mental illness.¹² In addition, mental health disorders result in a large economic cost to those afflicted, their families, and society as a whole.⁷ Approximately 8% of the total CareVio population reported an SPMI condition in 2023, which is lower than the 10.6% reported in 2022 due to the unavailability of SPMI claims data from the commercial insurers. The most frequently reported SPMI was Mood (Affective) Disorders (2.8%). Anxiety was the second most frequently reported SPMI (2.6%).

The Medicare FFS population had significantly more claims for almost every SPMI condition as compared to the other payers. The Medicaid population had slightly more claims than the Medicare FFS population for "Behavioral and emotional disorders with onset usually occurring in childhood and adolescence" and "Disorders of adult personality and behavior."

Of the total SPMI conditions reported (8,730), the category "Mental and Behavioral Disorders due to Psychoactive Substance Use" represented 10.7% (933) of the SPMI claims. Similar to 2022, this category accounted for 0.9% of the total CareVio population. However, a higher percentage of the total SPMI claims were in this category in 2023 (10.7%) as compared to 2022 (8.6%). This category of SPMI conditions includes ICD-10 codes that are related to Substance Use Disorders (SUD).

Dr. Thomas Insel, the former director of the National Institute of Mental Health recognizes "Engagement" as one of the solutions to the mental health crises in the United States¹⁷. "In contrast to people with physical health disorders, people suffering with the emotional pain of mental disorders often avoid care and those with the most severe illnesses are the least likely to engage." Dr. Insel further notes the importance of engagement, "Solving for engagement requires intervening early (before hopelessness, avoidance, and denial set in), meeting people where they are, and building trust by offering something of value."¹⁷



CareVio Subpopulations Key Findings

Comprehensive Case Management

Members enrolled in a Comprehensive Case Management program for >60 days (624) were mostly female (58%), ≥ 65 years of age (72%), non-Hispanic (93%), and White (65%). More members were ≥ 65 years of age in 2023 than in 2022 (72% vs. 65%). Most members were in the Medicare FFS and Medicare Advantage populations. Similar to 2022, members in this program primarily resided within the zip code 19720, the most populated zip code in New Castle County.

A total of 9.3% of program participants had SDOH needs identified, which is less than the 11.2% identified in 2022. The most frequently reported SDOH categories were “Facilities and other Health Care” and “Housing and Economic Circumstances.” As previously mentioned, housing instability and homelessness is a complex social problem in DE. According to Taylor²⁶ the number of individuals and families facing homelessness is far greater than the available subsidized or low-income housing. Chronic homelessness causes strain on social services from increased acute care utilization and the use of mental health resources, poverty supports, and homeless programs. Treating individuals with homelessness contributes to overall health care costs. Homelessness causes or is associated with serious health issues, including addiction, psychological disorders, malnutrition, and complications of diabetes.²⁵

Similar to 2022, for members participating in a Comprehensive Case Management program in 2023, the most frequently reported disability across all payers was “Ambulatory Issues/Mobility Impairment.” Given that more than 72% of the participants were ≥65 years of age, this finding is not unexpected.

The most frequently reported SPMI conditions were “Mood (Affective Disorders)” (14.3%) and “Anxiety” (13.9%). The Medicare FFS population had the highest rate of reported SPMI for members in a CareVio Comprehensive Case Management program.

In conclusion, members enrolled in a comprehensive case management program for ≥60 days have multiple or comprehensive co-morbid conditions, increased healthcare utilization, and increased health care costs. In 2023, 9.3% of program participants had an SDOH need. Figueroa, et al.,¹⁰ reported from an original investigation (2020), the presence of a mental illness can profoundly impact the ability of patients and health systems to manage other chronic health conditions. In this study, having a mental health disorder was associated with substantially higher spending other medical conditions, which increased total spending associated with mental health disorders 3-fold.



High Risk Chronic Obstructive Pulmonary Disease

Members enrolled in a High Risk Chronic Obstructive Pulmonary Disease program (58) were mostly female (64%), \geq to 65 years of age (84.5%), non-Hispanic (93%), and White (77.6%). A higher % of females enrolled in the program in 2023 than in 2022 (64% vs. 46%). There were significantly more enrolled members \geq 65 years of age in 2023 than in 2022 (84.5% vs. 72.7%). Most members were in the Medicare FFS and Medicare Advantage populations. Similar to 2022, members in this program primarily resided within the zip code 19720, the most populated zip code in New Castle County.

Two program participants (3.4%) had SDOH needs identified. One member had a need in the category "Primary Support Group, Including Family;" the other member had a need in the category "Education and Literacy."

The most frequently reported disabilities were Ambulatory Issues and Hearing Impairment. Most disabilities were reported in the Medicare FFS and Medicare Advantage populations.

The most frequently reported SPMI categories were for Mood (Affective Disorders) and Anxiety; both were reported for 17.2% of the population. A review article by Rahi et al., on the Impact of Anxiety and Depression in COPD found that COPD patients with comorbid anxiety or depression experience more acute exacerbations, incidences of rehospitalization, and carry a higher risk of mortality than COPD patients without these comorbidities²⁴.

In addition, Mental & Behavioral Disorders due to Psychoactive Substance Use was reported for 8.6% of the population. In a data review article, Macmurdo, et al.,¹⁹ reported that substance use has a significant secondary impact in patients with chronic asthma and COPD. For patients in this study, a documented diagnosis of substance misuse was associated with an increase in morbidity, risk of respiratory failure, need for mechanical ventilation and likelihood of sepsis on admission. Costs of an initial hospitalization were higher in patients with documented substance misuse compared to those without documented substance misuse, even though they had a shorter average length of stay. Documented substance misuse was associated with a significantly increased risk of 30 day readmission, and an increased likelihood of multiple readmission events.¹⁹

High Risk Congestive Heart Failure

Fewer members enrolled in a High Risk Congestive Heart Failure program (88) in 2023 than in 2022 (140). The members were almost evenly divided (45% female and 55% male). Most members were \geq 65 years of age (80.7%), non-Hispanic (96.6%), and White (73.9%). There was a higher % of members identified as White (73.9% vs 60.7%) and fewer identified as Black/African American (25% vs. 35.7%) in 2023 than in 2022. This is a noteworthy finding given that the racial distribution of the CareVio



population has not significantly changed from 2022. However, one possible cause of the lower program enrollment of members who identify as Black / African American is ChristianaCare's new program to improve care for Black patients with heart failure and hypertension. This new program uses a digital hybrid platform that provides patients with a dedicated health coach to help them follow their care plan and achieve their goals⁵. Furthermore, some members may have enrolled in insurer sponsored heart failure specific programs and hence, unavailable for enrollment into a CareVio program.

Most members were in the Medicare FFS and Medicare Advantage populations. However, in 2023, there were significantly fewer Medicare FFS members enrolled in a High Risk Congestive Heart Failure program than in 2022 (55 vs. 84), despite a small increase in the total CareVio Medicare FFS population. Furthermore, in 2023, there were significantly fewer Medicaid members enrolled in a High Risk Congestive Heart Failure program than in 2022 (9 vs. 32), although the total CareVio Medicaid population decreased only slightly. This decrease in program enrollment is being closely evaluated by CareVio and it will be important to see if this trend continues into 2024. In a randomized clinical trial for patients with acute decompensated heart failure, Kimchi, et al.,¹⁸ reported that post-discharge noninvasive telemonitoring and nurse telephone coaching improved survival among patients with heart failure with a high comorbidity burden.

Members primarily resided in the zip codes of 19701, 19720, and 19808, which differed somewhat from 2022; however, in both 2022 and 2023, the most frequent zip codes for these members were in New Castle County.

Four program participants (4.5%) had SDOH needs identified. Three members had a need in the category "Facilities & Other Health Care;" and one member had a need in the category "Other Psychosocial Circumstances."

Similar to 2022, the most frequently reported disabilities were Ambulatory Issues and Hearing Impairment. Most disabilities were reported in the Medicare FFS and Medicare Advantage populations.

The most frequently reported SPMI categories were for Mood (Affective Disorders) and Anxiety; both were reported for 6.8% of the population. Nearly all of the SPMI conditions reported were in the Medicare FFS Population.

High Risk Diabetes

Members enrolled in a High Risk Diabetes program (172) were predominantly female (63%), ≥ 65 years of age (44.2%), and non-Hispanic (90.1%). Half of the participating members were identified as Black/African American (50%) and 43% identified as White. There was a lower percentage of Black/African American participants in 2023 than in 2022 (50% vs. 58.2%). This is a noteworthy finding given that the racial distribution of the CareVio population has not significantly changed from 2022. It will



be important to see if this trend continues in 2024. Black / African Americans are disproportionately affected by the diabetes epidemic. The CDC reported age-adjusted data for 2019-2021 indicating the prevalence of diagnosed diabetes was 12.1% for non-Hispanic Black adults and 6.9% for non-Hispanic White adults.⁴

Most members were in the Medicaid population (36%) followed by Medicare FFS (30%) and Medicare Advantage (19%). Similar to 2022, most members resided in the zip code of 19720,

A total of 5.8% of program participants had an SDOH need identified, an increase from the 2.4% of program participants with an SDOH need in 2022. The most frequently identified need was for "Housing & Economic Circumstances", followed by "Facilities & Other Health Care", and "Primary Support Group, Including Family." In a scientific review article, Briggs, et al.,³ noted several studies that reported for individuals with diabetes, homelessness was associated with increased acute health care utilization, poor health care outcomes, and reduced health care access. Additionally, this same study noted that unstable housing makes it more difficult to engage in self-care, follow self-management routines, afford diabetes medications and supplies, and eat healthy foods.³

Similar to 2022, the most frequently reported disabilities were Ambulatory Issues, Hearing Impairment, and Visual impairment. Most disabilities were reported in the Medicare FFS and Medicare Advantage populations.

The most frequently reported SPMI categories were for Mood (Affective Disorders) (6.4%) and Anxiety (4.1%). Nearly all of the SPMI conditions reported were in the Medicare FFS and Medicare Advantage populations.

High Risk Pregnancy

Members enrolled in a high-risk pregnancy program (83) were primarily 30-39 years of age (44.6%) or 24-29 years of age (30.1%). However, similar to 2022, 3.6% of members were in the 2-19 years of age category. Similar to 2022, most members were Black/African American (68.7%) and in the Medicaid or Commercial populations. The percent of Black / African American members increased from 62.5% in 2022 to 68.7% in 2023. The percent of Hispanic/Latino women increased from 10.7% in 2022 to 14.5% in 2023. It is possible that the increase in Hispanic/Latino program participants is partly due to the increase in foreign born DE residents. Between 2020 and 2022, the number of foreign born residents more than doubled with about 33% being of Latino Origin, 50% being women, and 77% being in the 18-64 age group.²⁰

In 2023, 7.2% of program participants had a reported SDOH need, which was a decrease from the 14.3% of program participants that reported a need in 2022. Two participants reported an SDOH need of "Housing & Economic Circumstances." One participant reported a need within each of the following categories: "Primary Support



Group, Including Family," "Education & Literacy", "Psychosocial Circumstances," and "Upbringing."

One program participant had a reported disability of "Visual Impairment."

In 2023, five SPMI conditions were reported: Mood (Affective) Disorders (4.5%) and Anxiety (1.2%).

CareVio Subpopulation Programs Summary

Comparing the CareVio program participants in 2023 identified similarities to 2022, but also revealed potential areas of opportunity. There was a total of 1,025 members who participated in the subpopulation programs noted above. In all programs, with the exception of High-Risk pregnancy, the majority of program participants were ≥ 65 years of age with an insurer of Medicare FFS or Medicare Advantage. Similar to 2022, the majority of members resided in the zip code of 19720, the most populated region in DE.

Between 5.8% and 9.3% of CareVio program participants reported at least one SDOH need, with members in the Comprehensive Case Management program having the highest rate of SDOH needs (9.3%). The most frequently reported SDOH need was for Housing & Economic Circumstances, followed by Facilities & Other Health Care and Primary Support Group including Family.

The most frequently reported disabilities were for Ambulatory / Mobility, Hearing Impairment and Visual Impairment. Across all programs, the most frequently reported SPMI was for Mood (Affected) Disorder and Anxiety.

Of particular interest, in 2023, there were fewer Black / African American members enrolled in a High Risk Heart Failure and High Risk Diabetes program than in 2022. There was a higher percent of Hispanic / Latino women enrolled in a High Risk Pregnancy program in 2023 than in 2022.

Opportunities for Improvement/Action Plan

As part of the improvement plan proposed in the CareVio 2022 Population Health Assessment, several interventions were implemented. A focus was to expand programming to identify and engage members who met eligibility requirements for specific CareVio programs that fell outside of the programs discussed above. These expanded programs included 5 additional programs as listed below.

In 2023, CareVio initiated a **Metabolic Pilot Program** that focused on hypertension. Members were eligible if they had one of the following: (1) a HbA1C between 5.7 – 6.4 mg/dL, (2) Member without diabetes or a diabetic with HbA1C < 8 and 2 or more recent readings of blood pressure > 140/90 mmHg, (3) BMI > 35, or (4) Any member with stage III chronic kidney disease.



One of the baseline goals for the **Metabolic program** was for program participants with high blood pressure upon enrollment to have 2 subsequent lower blood pressure readings by the end of the program. However, there were no participants that met this outcome criteria. The second baseline outcome measure was the percent of participants that completed a program with a closure reason of having goals met or partially met, which yielded 27%. Fewer members participated in the Metabolic program than was anticipated in this specific Commercial population. Going forward, CareVio will sunset the Metabolic program in 2024; members with continual hypertension will be eligible for enrollment in a Comprehensive Case Management program. This program change will support a more thorough assessment of the member and development of a more robust care plan.

In 2023, CareVio formalized its **Behavioral Health program**. Eligibility criteria included substance Use Disorder (SUD) > 2 hospital visits, SUD overdose, acute exacerbation of an SPMI, and several other acute conditions. Approximately 66% of program participants had a Social Determinant of Screening (SDOH) completed while engaged in the Behavioral Health Program. Of those members who had a positive screening completed, nearly 95% were referred to additional services to meet their need. In addition, more than half of program participants had at least two primary care visits within the calendar year. This program is ongoing and will continue through 2024. In addition, in 2023, there was a Collaborative Case Management Conference titled "Lighting the Way." All CareVio staff were invited to attend. At this conference there was a presentation titled "Mental Health is Health" which focused on the prevalence, conditions, barriers to finding treatment and the importance of empathy. In 2024, the entire collaborative Case Management Conference, titled "Linking Health Together" focused on providing patient centered care and overcoming barriers for individuals with substance use disorder and addiction.

During the 1st half of calendar year 2023, CareVio created its **Pediatric Asthma Program** for members between the ages of 4-18 with a diagnosis of persistent asthma (mild, moderate, severe) and/or mild intermittent asthma. The data reflected that 59% of program participants did not have a completed Action Plan upon enrollment into the program and only 9% of program participants were able to identify their asthma triggers. This lack of understanding provided the CareVio pediatric care coordinators the opportunity to provide education and interventions to prevent asthma exacerbations. CareVio also assisted members with establishing and securing primary and/or specialty care. Given the growing interest in establishing care at the region's largest pediatric health system, a transfer of case management occurred. With decreasing enrollment for longitudinal case management needs, CareVio discontinued the **Pediatric Asthma Program** and are leveraging the resource offerings with the payer as well as regional based pediatric facilities.

In 2023, CareVio formalized and expanded the **Complex Care program** that concentrates on addressing the challenging set of circumstances affecting the



health of “superusers”- the top 1-5 percent of the population with chronic disease, complex behavioral health needs, and social barriers to health. The Complex Care Program concentrates on engagement with members in their primary home setting to ensure timely access to resources to meet health and social needs. The team's focus is on complex high-risk individuals who have medical, social, and behavioral health needs and lack traditional supports. The purpose of the program is to connect with members to identify and address social determinants of health, access to care, and inability to connect with community resource issues. The goal is to stabilize their overall health, build life skills, and promote resilience necessary for self-management. In 2023, a Social Determinant of Health (SDOH) Assessment was completed with nearly 70% of the program participants. Of program participants who identified with a SDOH need, 75% were referred to additional services. In 2023, 69% of participants had a decrease in emergency room utilization during the six months after program enrollment compared with utilization prior to program enrollment.

The **Complex Care program** is designed based on the Camden Coalition's “Hot Spotting” approach¹¹, the Case Management Society of America's (CMSA) Standards of Practice for Case Management⁶, and the National Center for Complex Health and Social Needs, which developed best practice to address complex care based on the Blueprint for Complex Care¹⁶. The Blueprint for Complex Care was developed by the National Center for Complex Health and Social Needs, the Institute for Healthcare Improvement, and the Center for Health Care Strategies. CareVio expanded the Complex Care program in 2023 with the hiring of a community Registered Nurse to focus on providing maternal care to vulnerable members.

In 2023, CareVio formalized its **Palliative Care program**. This program works in conjunction with all other CareVio programs. The purpose of this program is to coordinate care, advocate for services, and to improve the quality of life for its members. In addition to alleviating symptoms and improving quality of life, palliative care can help members understand their choices for medical treatment and when ready, transition to appropriate end of life care. The program was designed utilizing the Population Health and Palliative Care toolkit²⁷. The goal for 2023 was for 80% of participants to have advanced care planning in place. However, the data collected showed that only 16% of participants met this goal. It is important to note that the data collected was upon program enrollment and not after a specific amount of time in the program. In the future, goals will be established to better reflect the impact that CareVio has had on promoting the importance of advanced care planning.



Summary of Findings for 2023 Population Health Assessment and Corresponding Action Plans

The 2023 population assessment findings as outlined above provide CareVio with opportunities to enhance and expand case management programming. As noted in the CareVio 2023 Annual Report, a focus in 2024 will be additional aligning of the domain structure that was implemented in 2022. As CareVio transitions into a new and innovative electronic Population Health platform, this new platform aims to connect and curate health information to make it accessible and useful thus improving coordination of care. While completing the transition, CareVio will move toward a more streamlined domain build. This enhanced structure will promote a more consistent and streamlined approach to providing care, allow CareVio to expand the breadth of conditions included in its programs, and thus, provide more services to more individuals in its population. Ultimately, the goal of these organizational changes is to have a lasting and positive impact on the nexus between better health and appropriate utilization of costly and limited health care resources. Examples of the domain structure changes include overarching programs, such as Comprehensive Case Management that will now encompass the disease management and longitudinal programs (e.g., High Risk Diabetes, Metabolic Program, etc.)

The assessment findings for 2023 also identified a small increase in the number of Spanish speaking members, an increase in Latina pregnant women who participated in the CareVio High Risk Pregnancy Program, and lastly, members who communicate using American Sign Language. In 2024, education will be presented to care coordinators as a “refresher” to review member electronic charts prior to member outreach in order to identify potential language barriers. Additionally, education will be provided of the proper identification for an alert to note “Language Line” that is front facing on the patient’s electronic chart. The Health Equity Department of ChristianaCare provides access to multiple classes, workshops, and quick tips. CareVio is in the process of evaluating and determining the usefulness of the classes and tips available to align educational opportunities to CareVio staff.

As noted previously, Medicaid attributed members continue to have the lowest percent of preventative claims. CareVio is in the process of transitioning to a new and innovative electronic Population Health platform. This new platform provides a better solution for meeting CareVio’s care management needs as it unifies patient data across systems and care settings. It offers a level of customization and interoperability that will allow all the ChristianaCare Population Health initiatives to succeed.

The new platform provides a comprehensive 360-degree member view that captures a member’s health journey with relevant clinical data and actionable



insights to close gaps in care. For example, the due date for a member to complete their Annual Wellness Visit and other screening visits is easily visible. It will support CareVio care managers with the data needed to encourage and assist members in accessing preventative care.

Additionally, an opportunity to identify Risk Management via a dashboard can be utilized to help risk recapture opportunities, such as appointment status and Primary Care visits. It can show the distribution of patients who have completed their Annual Wellness / screening visits and patients for whom it is due. The dashboard can show impactable care gaps that with appropriate interventions can be directly addressed by the clinician.

In 2024, a priority focus will be Cardiovascular disease. As noted above in the 2023 findings, approximately half of all Medicare FFS and Medicare Advantage members have a claim with Cardiovascular hierarchy, with hypertension as the most common condition. Staff education will be provided in 2024 on managing patients with hypertension. Relative to cardiovascular, CareVio identified there were fewer members in the Congestive Heart Failure (CHF) program in 2023 than the previous year; significantly fewer Medicaid patients in 2023 vs. 2022 (9 vs. 32) despite only a slight decrease in the total CareVio Medicaid population. Also, fewer Medicare FFS members were in the CHF program despite an increase in the Medicare FFS population.

CareVio continues to focus on increased member engagement with a goal of decreasing the number of member declinations. Preliminary data shows that there has been an increase in the declination rate for the Medicare population as a whole, which differs from the declination rate seen with the Commercial and Medicaid populations. CareVio has implemented several strategies to help mitigate poor engagement.

First, at the 2023 CareVio Case Management Conference, a guest speaker from ChristianaCare Customer Engagement discussed best practices and opportunities with the CareVio Care Coordinators. Throughout 2023, there were concerns raised by some members who felt the calls from CareVio were "spam" or a "scam". To address this concern, CareVio is recommending that insurer partners provide members with information on CareVio and place the CareVio phone number and logo on the back of the insurer's insurance card. This approach may provide members with the reassurance that their payer has partnered with CareVio and thus, they should feel safe to engage with CareVio. Finally, in 2023 and extending into 2024, an effort has been initiated by CareVio leaders to listen to member outreach phone calls as part of the validation process and care coordinator quarterly reviews. The review of outreach calls provided further insight and opportunities to improve member engagement.



As the 2023 Population Health Assessment findings denote above, there was a lower percentage of African American/Black participants in programs last year. The Health Equity Department of ChristianaCare provides access to multiple classes, workshops, and quick tips which CareVio is in the process of evaluating to determine the usefulness of the classes for staff. These include but are not limited to: The Role of Literacy in Health Outcomes, Health Disparities in Black and African American Communities, Idioms, and Informal Sayings, etc. Additionally, CareVio will implement a strategy to identify eligible members for Comprehensive Case Management who have been identified with disparities to increase engagement during the next year.

Due to the continued increase of Mood (depression) and Anxiety disorders reported among the Medicare population, CareVio plans to provide education on depression in the elderly. CareVio is committed to educating care coordinators and social workers on screening and assessing for depression amongst members, as well as connecting members with appropriate resources.

A continued identified need in Delaware continues to be the Social Determinant of Health relative to Housing. Adequate housing continues to be a challenge in Delaware. CareVio works closely with all housing and support services in Delaware, and additionally members of our CareVio Social Worker team participate on the Delaware Housing Alliance Committee. This participation ensures that CareVio has knowledge and access to all of the resources available to members. Within all CareVio programs, participants in programming are screened for SDOH needs, and referred to resources when identified.

Previously noted, CareVio has committed to performance improvement initiatives for 2024. These activities, although they may commence in 2024, they will likely not be fully implemented with available data until mid-2025.



Meet the Team

CareVio Leadership and Team



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Appendix A

Disabilities: ICD-10 codes utilized for obtaining disabilities via claims data

Disability Category	Code
Intellectual Disabilities	F70: Mild intellectual disabilities F71: Moderate intellectual disabilities F72: Severe intellectual disabilities F73: Profound intellectual disabilities F78: Other intellectual disabilities F79: Unspecified intellectual disabilities
Pervasive and Specific Developmental Disorders	F80: Specific developmental disorders of speech and language F82: Specific developmental disorders of scholastic skills F84: Pervasive developmental disorders F88: Other disorders of psychological development F89: Unspecified disorder of psychological development
Hearing Impairment	H90: Conductive and Sensorineural hearing loss H91: Other and unspecified hearing loss
Visual Impairment	H53: Visual disturbances H54: Blindness and low vision
Mobility Impairment	R26-R26.9: Abnormalities of gait and mobility Z74.09: Other reduced mobility
Speech Impairment	R47: Speech disturbances, not elsewhere classified

Severe and Persistent Mental Illness (SPMI): ICD-10 codes utilized for SPMI via claims data

SPMI Category	Code
Mental disorders due to known physiological conditions	F01: Vascular dementia F02: Dementia in other disease classified elsewhere F03: Unspecified dementia F04: Amnesic disorder due to known physiological condition F05: Delirium due to known physiological condition F06: Other mental disorders due to known physiological condition F07: Personality and behavioral disorders due to known physiological condition F09: Unspecified mental disorder due to known physiological condition
Mental and behavioral disorders due to psychoactive substance use	F10: Alcohol related disorders F11: Opioid related disorders F12: Cannabis related disorders F13: Sedative, hypnotic, or anxiolytic related disorders F14: Cocaine related disorders



	F15: Other stimulant related disorders F16: Hallucinogen related disorders F17: Nicotine dependance F18: Inhalant related disorders F19: Other psychoactive substance related disorders
Schizophrenia, Schizotypal, delusional, and other non-mood psychotic disorders	F20: Schizophrenia F21: Schizotypal disorder F22: Delusional disorder F23: Brief psychotic disorder F24: Shared psychotic disorder F25: Schizoaffective disorder F28: Other psychotic disorder not due to a substance or known physiological condition F29: Unspecified psychosis not due to a substance or known physiological condition
Mood (affective) disorders	F30: Manic episode F31: Bipolar disorder F32: Depressive episode F33: Major depressive disorder, recurrent F34: Persistent mood [affective] disorder F35: Unspecific mood [affective] disorder
Anxiety, dissociative, stress-related, somatoform and other non-psychotic disorders	F40: Phobic anxiety disorders F41: Other anxiety disorders F42: Obsessive-compulsive disorder F43: Reaction to severe stress, and adjustment disorder F44: Dissociative and conversion disorders F45: Somatoform disorders F48: Other non-psychotic mental disorders
Behavioral syndromes associated with physiological disturbances and physical factors	F50: Eating disorders F51: Sleep disorders not due to a substance or known physiological condition F52: Sexual dysfunction not due to a substance or known physiological condition F53: Mental behavioral disorders associated with disorders or disease classified elsewhere F55: Abuse of non-psychoactive substances F59: Unspecified behavioral syndromes associated with physiological disturbances and physical factors
Disorders of adult personality and behavior	F60: Specific personality disorders F63: Impulse disorders F64: Gender identity disorders F65: Paraphilias F66: Other sexual disorders F68: Other disorders of adult personality and behavior F69: Unspecified disorder of adult personality and behavior



Behavioral and emotional disorders with onset usually occurring in childhood and adolescence	F90: Attention-deficit hyperactivity disorders F91: Conduct disorders F93: Emotional disorders with onset specific to childhood F94: Disorders of social functioning with onset specific to childhood and adolescence F95: Tic disorder F98: Other behavioral and emotional disorders with onset usually occurring in childhood and adolescence
Unspecified mental disorder	F99: Mental disorder, not otherwise specified

Social Determinant of Health (SDOH): ICD-10 codes utilized via claims and Soarian encounters

SDOH Category	Code
Occupational Exposure to Risk Factors	Z57.8 - Occupational exposure to other risk factors Z57.0 - Occupational exposure to noise Z57.9 - Occupational exposure to unspecified risk factor Z57.5 - Occupational exposure to toxic agents in other industries Z57.2 - Occupational exposure to dust Z57.31 - Occupational exposure to environmental tobacco smoke Z57.4 - Occupational exposure to toxic agents in agriculture
Primary Support Group, Including Family Circumstances	Z63.4 - Disappearance and death of family member Z63.0 - Problems in relationship with spouse or partner Z63.79 - Other stressful life events affecting family and household Z63.8 - Other specified problems related to primary support group Z63.6 - Dependent relative needing care at home Z63.9 - Problem related to primary support group, unspecified Z63.5 - Disruption of family by separation and divorce Z63.72 - Alcoholism and drug addiction in family Z63.32 - Other absence of family member Z63.31 - Absence of family member due to military deployment Z63.71 - Stress on family due to return of family member from military deployment Z63.1 - Problems in relationship with in-laws
Psychosocial Circumstances	Z64.0 - Problems related to unwanted pregnancy Z64.1 - Problems related to multiparity
Education and Literacy	Z55.9 - Problems related to education and literacy, unspecified Z55.3 - Underachievement in school Z55.8 - Other problems related to education and literacy Z55.0 - Illiteracy and low-level literacy Z55.5 - Less than a high school diploma Z55.4 - Educational maladjustment and discord with teachers and classmates
Employment and Unemployment	Z56.0 - Unemployment, unspecified Z56.6 - Other physical and mental strain related to work



	Z56.9 - Unspecified problems related to employment Z56.3 - Stressful work schedule Z56.1 - Change of job Z56.5 - Uncongenial work environment Z56.89 - Other problems related to employment Z56.2 - Threat of job loss Z56.4 - Discord with boss and workmates
Housing and Economic Circumstances	Z59.0 - Homelessness Z59.00 - Homelessness unspecified Z59.8 - Other problems related to housing and economic circumstances Z59.9 - Problem related to housing and economic circumstances, unspecified Z59.1 - Inadequate housing Z59.4 - Lack of adequate food Z59.6 - Low income Z59.01 - Sheltered homelessness Z59.02 - Unsheltered homelessness Z59.3 - Problems related to living in residential institution Z59.41 - Food insecurity Z59.89 - Other problems related to housing and economic circumstances Z59.812 - Housing instability, housed, homelessness in past 12 months Z59.7 - Insufficient social insurance and welfare support Z59.2 - Discord with neighbors, lodgers, and landlord Z59.48 - Other specified lack of adequate food Z59.811 - Housing instability, housed, with risk of homelessness
Facilities and Other Health Care	Z75.1 - Person awaiting admission to adequate facility elsewhere Z75.8 - Other problems related to medical facilities and other health care Z75.5 - Holiday relief care Z75.2 - Other waiting period for investigation and treatment Z75.3 - Unavailability and inaccessibility of health-care facilities Z75.0 - Medical services not available in home
Other Psychosocial Circumstances	Z65.8 - Other specified problems related to psychosocial circumstances Z65.3 - Problems related to other legal circumstances Z65.9 - Problem related to unspecified psychosocial circumstances Z65.5 - Exposure to disaster, war, and other hostilities Z65.1 - Imprisonment and other incarceration Z65.2 - Problems related to release from prison
Social Environment	Z60.2 - Problems related to living alone Z60.4 - Social exclusion and rejection Z60.9 - Problem related to social environment, unspecified Z60.8 - Other problems related to social environment Z60.0 - Problems of adjustment to life-cycle transitions



	Z60.5 - Target of (perceived) adverse discrimination and persecution
Upbringing	Z62.820 - Parent-biological child conflict Z62.810 - Personal history of physical and sexual abuse in childhood Z62.811 - Personal history of psychological abuse in childhood Z62.21 - Child in welfare custody Z62.819 - Personal history of unspecified abuse in childhood Z62.22 - Institutional upbringing Z62.812 - Personal history of neglect in childhood Z62.890 - Parent-child estrangement NEC Z62.898 - Other specified problems related to upbringing Z62.9 - Problem related to upbringing, unspecified Z62.29 - Other upbringing away from parents Z62.891 - Sibling rivalry Z62.1 - Parental overprotection Z62.822 - Parent-foster child conflict
Physical Environment	Z58.0 Exposure to noise Z58.1 Exposure to air pollution Z58.2 Exposure to water pollution Z58.3 Exposure to soil pollution Z58.4 Exposure to radiation Z58.5 Exposure to other pollution Z58.6 Inadequate drinking-water supply Z58.7 Exposure to environmental tobacco smoke Z58.81 Exposure to lead Z58.82 Exposure to asbestos Z58.89 Other problems related to physical environment Z58.9 Problem related to physical environment, unspecified



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