## Files for TRAINING and HOLDOUT

### Training dataset: 2021\_Competition\_Training.csv

Number of records: 974,842

no vaccination: covid_vaccination = 0	805,389	83%
vaccination: covid_vaccination = 1	169,453	17%
	974,842	
SEX_CD: F	524,915	54%
SEX_CD: M	449,927	46%
	974,842	
RACE_CD: 0	20,994	2%
RACE_CD: 1	813,447	83%
RACE_CD: 2	85,731	9%
RACE_CD: 3	12,230	1%
RACE_CD: 4	10,480	1%

15,765 974,842

14,467

1,728

1%

0%

2%

## Holdout dataset: 2021\_Competition\_Holdout.csv

RACE\_CD: 5

RACE\_CD: 6

null

Number of records: 525,158

SEX_CD: F	282,386	54%
SEX_CD: M	242,772	46%
	525,158	

RACE_CD: 0	11,369	2%
RACE_CD: 1	438,131	83%
RACE_CD: 2	45,786	9%
RACE_CD: 3	6,557	1%

RACE_CD: 4	5,699	1%
RACE_CD: 5	7,936	2%
RACE_CD: 6	978	0%
null	8,702	2%

525,158

_
Features
id
auth_3mth_post_acute_dia
rx_gpi2_72_pmpm_cost_6to9m_b4
atlas_pct_laccess_child15
atlas_recfacpth14
atlas_pct_fmrkt_frveg16
atlas_pct_free_lunch14
bh_ip_snf_net_paid_pmpm_cost_9to12m_b4
auth_3mth_acute_ckd
bh_ncal_pmpm_ct
src_div_id
3.0_4.1.
total_bh_copay_pmpm_cost_t_9-6-3m_b4
total_bii_copay_piiipiii_cost_t_3-0-3iii_b4
bh in cut naid numum cost 2toCm h1
bh_ip_snf_net_paid_pmpm_cost_3to6m_b4
cons_chmi
mcc_ano_pmpm_ct_t_9-6-3m_b4
auth_3mth_post_acute_trm
rx_maint_pmpm_cost_t_12-9-6m_b4
auth_3mth_post_acute_rsk
cons_ltmedicr
rx_gpi4_6110_pmpm_ct
atlas_pc_snapben15
credit bal nonmtgcredit 60dpd
rx_bh_mbr_resp_pmpm_cost_9to12m_b4
.x_ssi-csp_pinpin_cost_5to12in_b4
rx_nonbh_pmpm_cost_t_9-6-3m_b4
atlas_pct_laccess_nhna15
atias_ptt_iactess_iiiiia15
and and a
auth_3mth_acute_vco
credit_hh_nonmtgcredit_60dpd
rx_bh_pmpm_ct_0to3m_b4
auth_3mth_dc_ltac
cons_lwcm10
auth_3mth_post_acute_inj

atlas_fsrpth14
auth_3mth_dc_home
atlas_wicspth12
2.47
rx_gpi2_17_pmpm_cost_t_12-9-6m_b4
cons_hxmioc
ry generic name cost + 6.2.0m h4
rx_generic_pmpm_cost_t_6-3-0m_b4
cmsd2_sns_digest_abdomen_pmpm_ct
atlas_ghveg_farms12
credit_hh_bankcardcredit_60dpd
credit_iii_balikcardcredit_boupd
total_outpatient_allowed_pmpm_cost_6to9m_b4
cons cwht
atlas_netmigrationrate1016
atlas_pct_laccess_snap15
bh ncdm ind
bii_ficani_ind
rx_nonmaint_mbr_resp_pmpm_cost_9to12m_b4
atlas_retirement_destination_2015_upda
anao_ an
rx_overall_mbr_resp_pmpm_cost_t_6-3-0m_b4
atlas_naturalchangerate1016
ccsp_236_pct
''
bh_ip_snf_mbr_resp_pmpm_cost_6to9m_b4
rx_overall_dist_gpi6_pmpm_ct_t_6-3-0m_b4
auth_3mth_post_acute_ben
atlas_pct_laccess_hisp15
auth_3mth_dc_no_ref
rx_overall_mbr_resp_pmpm_cost
rx_overall_gpi_pmpm_ct_0to3m_b4
auth_3mth_dc_snf
rx_phar_cat_humana_pmpm_ct_t_9-6-3m_b4
atlas_pct_laccess_hhnv15
auth_3mth_acute_ccs_048
bh_ip_snf_net_paid_pmpm_cost_0to3m_b4

auth_3mth_acute_end
auth_3mth_psychic
atlas_hiamenity
auth_3mth_bh_acute
credit_bal_consumerfinance
auth_3mth_acute_chf
rx_overall_gpi_pmpm_ct_t_6-3-0m_b4
rwjf_uninsured_pct
mcc_chf_pmpm_ct_t_9-6-3m_b4
rx_mail_mbr_resp_pmpm_cost_0to3m_b4
hh
bh_urgent_care_copay_pmpm_cost_t_12-9-6m_b4
auth_3mth_hospice
auth_3mth_acute_bld
atlas_pct_wic15
100
ccsp_193_pct
auth_3mth_dc_hospice
auth_3mth_acute_ccs_030
atlas_pct_fmrkt_baked16
rx_nonmaint_mbr_resp_pmpm_cost
auth_3mth_acute_skn
atlas_veg_farms12
atlas_vlfoodsec_13_15
20.04 11.4 25
rx_gpi2_34_dist_gpi6_pmpm_ct
bh_ip_snf_net_paid_pmpm_cost
credit_hh_bankcard_severederog
rx_hum_16_pmpm_ct
est_age
rx_maint_pmpm_cost_t_6-3-0m_b4
cnt_cp_webstatement_pmpm_ct
atlas_pct_laccess_seniors15
phy_em_px_pct
atlas_percapitainc

rwif unincured adults not
rwjf_uninsured_adults_pct
rx_generic_mbr_resp_pmpm_cost_0to3m_b4
outh 2mth south noo
auth_3mth_acute_neo
rwjf_air_pollute_density
rx_gpi2_02_pmpm_cost
atlas recfac14
cons_mobplus
lab_albumin_loinc_pmpm_ct
atlas_pct_obese_adults13
atias_pet_obese_addits15
rx_maint_net_paid_pmpm_cost_t_12-9-6m_b4
rev_pm_obsrm_pmpm_ct
atlas_pct_sfsp15
total_physician_office_net_paid_pmpm_cost_9to12m_b4
atlas_pc_dirsales12
<del>-' -</del>
med_ip_snf_admit_days_pmpm
rej_med_outpatient_visit_ct_pmpm_t_6-3-0m_b4
auth_3mth_post_acute_vco
cms_tot_partd_payment_amt
rx_nonotc_dist_gpi6_pmpm_ct
rx_nonmaint_pmpm_ct
rx_nonbh_mbr_resp_pmpm_cost_6to9m_b4
cons_stlnindx
atlas_hipov_1115
auth_3mth_post_acute_dig
rx_nonbh_mbr_resp_pmpm_cost
atlas_redemp_snaps16
atlas_berry_farms12
rej_med_ip_snf_coins_pmpm_cost_t_9-6-3m_b4
rwjf_inactivity_pct
i wji_mactivity_pct
rx_gpi2_72_pmpm_ct_6to9m_b4
cons_n2pmr
r

med_physician_office_allowed_pmpm_cost_t_9-6-3m_b4
auth_3mth_acute_res
rev_cms_ct_pmpm_ct
atlas foodhub16
<del>-</del>
total_physician_office_copay_pmpm_cost
auth_3mth_acute_dig
auth_3mth_dc_acute_rehab
atlas_pct_fmrkt_anmlprod16
auth_3mth_post_acute_hdz
bh ip snf mbr resp pmpm cost 3to6m b4
auth_3mth_acute_ccs_172
credit_num_agencyfirstmtg
total_physician_office_net_paid_pmpm_cost_t_9-6-3m_b4
auth 3mth acute ccs 154
atlas_type_2015_mining_no
atlas_agritrsm_rct12
rx_days_since_last_script
atlas_pct_laccess_pop15
auth_3mth_post_acute_res
auth 3mth acute inf
rx_gpi2_01_pmpm_cost_0to3m_b4
atlas_povertyallagespct
covid_vaccination
rwjf_uninsured_child_pct
rx_branded_pmpm_ct_t_6-3-0m_b4
mod outpationt doduct name cost + 0.6.2m h/
med_outpatient_deduct_pmpm_cost_t_9-6-3m_b4
credit_bal_mtgcredit_new
atlas_low_employment_2015_update
atlas_pct_diabetes_adults13
atlas_pct_laccess_nhasian15
atlas_deep_pov_all
atlas_net_international_migration_rate
atlas_deep_pov_children
atias_ueep_pov_cilliureii

bh_ncdm_pct
auth_3mth_non_er
atlas_foodinsec_child_03_11
rx_branded_mbr_resp_pmpm_cost
atlas_pc_wic_redemp12
rwjf_mv_deaths_rate
auth_3mth_acute_cad
atlas_pct_reduced_lunch14
cons_nwperadult
total_allowed_pmpm_cost_t_9-6-3m_b4
rx_hum_28_pmpm_cost
mabh_seg
cms_orig_reas_entitle_cd
atlas totalocchu
med_physician_office_ds_clm_6to9m_b4
med_physician_office_ds_cfm_ofcosm_s i
bh_ip_snf_mbr_resp_pmpm_cost_9to12m_b4
atlas_pct_loclfarm12
rx_generic_mbr_resp_pmpm_cost
TX_generic_mbi_resp_pmpm_cost
total_outpatient_mbr_resp_pmpm_cost_6to9m_b4
total_outpatient_mbl_resp_pmpm_cost_oto5m_b4
auth_3mth_post_acute_cir
autil_Silitil_post_acute_til
ry gnid 2400 nmnm et
rx_gpi4_3400_pmpm_ct
auth 2mth mart and an
auth_3mth_post_acute_cer
lab_dist_loinc_pmpm_ct
atlas_pct_nslp15
rx_generic_pmpm_ct_0to3m_b4
oontwk_mbr_resp_pmpm_cost_t_6-3-0m_b4
atlas_pct_laccess_lowi15
bh_ncal_ind
auth_3mth_post_acute_mus
atlas_pct_fmrkt_sfmnp16
hum_region
rx_nonmail_dist_gpi6_pmpm_ct_t_9-6-3m_b4
atlas_pct_loclsale12
_' _

bh_ip_snf_net_paid_pmpm_cost_6to9m_b4
rej_med_er_net_paid_pmpm_cost_t_9-6-3m_b4
credit bal autobank
CIEUIL_DAI_AULODAIIK
med_outpatient_mbr_resp_pmpm_cost_t_9-6-3m_b4
rx_overall_mbr_resp_pmpm_cost_0to3m_b4
rx_tier_2_pmpm_ct_3to6m_b4
rx_nonbh_net_paid_pmpm_cost
TX_NONBN_Net_paid_pmpm_cost
rx_maint_pmpm_ct_9to12m_b4
rx_nonbh_net_paid_pmpm_cost_t_6-3-0m_b4
atlas_type_2015_recreation_no
auth_3mth_post_acute_sns
rx_gpi2_39_pmpm_cost_t_6-3-0m_b4
atlas_type_2015_update
cms_risk_adjustment_factor_a_amt
total_ip_maternity_net_paid_pmpm_cost_t_12-9-6m_b4
rx_generic_pmpm_cost
cmsd2_eye_retina_pmpm_ct
auth_3mth_acute_can
auth_3mth_post_acute
auth_3mth_facility
rx_days_since_last_script_0to3m_b4
atlas_population_loss_2015_update
rx_maint_pmpm_ct_t_6-3-0m_b4
auth_3mth_post_acute_men
auth_3mth_acute_mean_los
credit_num_autofinance
cons_rxmaint
rx_mail_net_paid_pmpm_cost_t_6-3-0m_b4
auth_3mth_home
rx_maint_mbr_resp_pmpm_cost_6to9m_b4

cons_hxwearbl
total_physician_office_mbr_resp_pmpm_cost_t_9-6-3m_b4
atlas_pct_laccess_black15
atlas_hh65plusalonepct
atlas_farm_to_school13
auth_3mth_acute_inj
auth_3mth_acute_ccs_153
rej_days_since_last_clm
auth_3mth_transplant
bh_outpatient_net_paid_pmpm_cost
atlas_dirsales_farms12
rx_generic_pmpm_cost_6to9m_b4
rev_cms_ansth_pmpm_ct
atlas_convspth14
total_med_allowed_pmpm_cost_9to12m_b4
rx_mail_mbr_resp_pmpm_cost_t_9-6-3m_b4
med_outpatient_visit_ct_pmpm_t_12-9-6m_b4
rx_nonbh_pmpm_ct_t_9-6-3m_b4
auth_3mth_acute
rx_nonbh_pmpm_ct_0to3m_b4
atlas_pc_ffrsales12
auth_3mth_dc_left_ama
credit_bal_bankcard_severederog
atlas_povertyunder18pct
rx_tier_1_pmpm_ct_0to3m_b4
auth_3mth_acute_ccs_227
cons_estinv30_rc
auth_3mth_bh_acute_men
rx_gpi2_34_pmpm_ct
auth_3mth_dc_custodial
atlas_veg_acrespth12
atlas grocpth14
total_med_net_paid_pmpm_cost_t_6-3-0m_b4

rx_gpi2_90_dist_gpi6_pmpm_ct_9to12m_b4		
atlas_csa12		
sex_cd		
rx_gpi2_62_pmpm_cost_t_9-6-3m_b4		
lang_spoken_cd		
rx_overall_gpi_pmpm_ct_t_12-9-6m_b4		
auth_3mth_ltac		
cons_hhcomp		
cons_mcomp		
auth 2mth aguta hal-		
auth_3mth_acute_hdz		
cons_rxadhs		
auth_3mth_acute_men		
atlas_pct_fmrkt_snap16		
met_obe_diag_pct		
cms_partd_ra_factor_amt		
atlas_pct_sbp15		
rwjf_resident_seg_black_inx		
atlas_pct_cacfp15		
auth_3mth_rehab		
pdc_lip		
atlas_ffrpth14		
credit_num_autobank_new		
create_nam_aatobank_new		
auth_3mth_acute_ccs_086		
rx_tier_2_pmpm_ct		
cons_n2pwh		
rx_nonmaint_dist_gpi6_pmpm_ct_t_12-9-6m_b4		
atlas_berry_acrespth12		
atlas_pct_fmrkt_credit16		
atlas_slhouse12		
atlas_pc_fsrsales12		
credit_hh_1stmtgcredit		
auth_3mth_snf_post_hsp		
atlas_pct_fmrkt_wiccash16		
atlas_foodinsec_13_15		
auth_3mth_acute_cer		
cons rxadhm		
_		
atlas_fmrktpth16		
rx_nonotc_pmpm_cost_t_6-3-0m_b4		

cci_dia_m_pmpm_ct		
auth_3mth_acute_trm		
cons_n2phi		
bh_physician_office_copay_pmpm_cost_6to9m_b4		
rwjf_income_inequ_ratio		
rej_total_physician_office_visit_ct_pmpm_0to3m_b4		
rej_total_physician_office_visit_ct_phipm_otosin_b4		
auth_3mth_acute_dia		
credit_num_nonmtgcredit_60dpd		
auth_3mth_snf_direct		
credit_bal_autofinance_new		
auth_3mth_acute_ccs_067		
auth_3mth_acute_ccs_043		
rwjf_men_hlth_prov_ratio		
auth_3mth_dc_home_health		
rx_gpi2_56_dist_gpi6_pmpm_ct_3to6m_b4		
TX_Spi2_30_dist_Spi0_pmpm_et_stcom_s 1		
cmsd2_sns_genitourinary_pmpm_ct		
auth_3mth_acute_cir		
auth_3mth_acute_ner		
auth_3mth_acute_ccs_094		
autii_3iiitii_acute_ccs_094		
med_ambulance_coins_pmpm_cost_t_9-6-3m_b4		
hedis_dia_hba1c_ge9		
bh_ncal_pct		
atlas_pct_snap16		
ccsp_227_pct		
atlas_ghveg_sqftpth12		
rx_days_since_last_script_6to9m_b4		
atlas_orchard_acrespth12		
atlas_persistentchildpoverty_1980_2011		

auth_3mth_post_acute_cad	
atlas_pct_laccess_multir15	
cons_cgqs	
ccsp_065_pmpm_ct	
auth_3mth_acute_ccs_044	
atlas medhhinc	
adas_meanime	
rx_maint_net_paid_pmpm_cost_t_9-6-3m_b4	
rwjf_mental_distress_pct	
rwJi_mentai_distress_pct	
bh_ip_snf_admit_days_pmpm_t_9-6-3m_b4	
,	
rx_phar_cat_cvs_pmpm_ct_t_9-6-3m_b4	
zip_cd	
auth_3mth_post_acute_ckd	
atlas_pct_laccess_nhpi15	
auth_3mth_post_acute_ner	
auth_3mth_post_er	
credit_num_consumerfinance_new	
rx_gpi2_49_pmpm_cost_0to3m_b4	
cons chva	
atlas_avghhsize	
rx_overall_net_paid_pmpm_cost_6to9m_b4	
atlas_ownhomepct	
atlas_orchard_farms12	
total_physician_office_visit_ct_pmpm_t_6-3-0m_b4	
atlas_pct_fmrkt_wic16	
rx_gpi2_33_pmpm_ct_0to3m_b4	
auth_3mth_post_acute_chf	
rwjf_social_associate_rate	
atlas_freshveg_farms12	
112 102 1021	
auth_3mth_acute_ccs_042	
auth 2mth noct acute inf	
auth_3mth_post_acute_inf	
auth 2mth and an	
auth_3mth_acute_sns	
days_since_last_clm_0to3m_b4	

#### Description

Person Identifier - unique for a member

unique authorization/admit count for post acute admits related to diabetes in the past three months {Based on Major Clinical Condition}

cost per month of prescriptions related to ANTICONVULSANTS drugs in the past sixth to ninth month prior to the score date {Based on Generic Product Identifier-2 grouping}

Children, low access to store

Recreation & fitness facilities/1,000 pop

Farmers' markets that report selling fruit & vegetables

Students eligible for free lunch

net paid cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past ninth to twelfth month prior to the score date

unique authorization/admit count for acute admits related to chronic kidney disease in the past three months {Based on Major Clinical Condition}

count per month of behavioral health claims related to neuro cognition disorder: alzheimers in the past one year

The division ID assigned by the legacy system {each platform has a different system}

trend of copay cost per month for behavioral health claims in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month prior to the score date

net paid cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past third to sixth month prior to the score date

Census Median Household Income

trend of claims per month related to congenital anomalies in the past third to sixth month versus sixth to ninth month prior to the score date {based on Major Clinical Condition}

unique authorization/admit count for post acute admits related to head/neck/spine trauma, multiple fractures, and paralysis in the past three months {Based on Major Clinical Condition}

trend of cost per month of prescriptions related to maintenance drugs in the past sixth to ninth month versus ninth to twelfth month prior to the score date

unique authorization/admit count for post acute admits related to risk behaviors in the past three months {Based on Major Clinical Condition}

Late to Medicare Index

count per month of prescriptions related to ADHD/ANTI-NARCOLEPSY/ANTI-OBESITY/ANOREXIANTS: AMPHETAMINES drugs in the past one year {Based on GPI4 grouping}

SNAP benefits per capita

Balance Non-Mortgage Loan Accts 60+ Days Past Due

member reponsible cost per month of prescriptions related to behavioral health drugs in the past ninth to twelfth month prior to the score date

trend of cost per month of prescriptions related to non behavioral health drugs in the past third to sixth month versus sixth to ninth month prior to the score date

American Indian or Alaska Native, low access to store

unique authorization/admit count for acute admits related to v-codes in the past three months {Based on Major Clinical Condition}

% HH Non-Mortgage Loan Accts 60+ Days Past Due

count per month of prescriptions related to behavioral health drugs in the past three months prior to score date

unique authorization/admit count for discharge category related to Itac in the past three months

The probability of the individual not exercising at all

unique authorization/admit count for post acute admits related to injury and poisoning in the past three months {Based on Major Clinical Condition}

Full-service restaurants/1.000 pop

unique authorization/admit count for discharge category related to home in the past three months

WIC-authorized stores/1.000 pop

trend of cost per month of prescriptions related to VACCINES drugs in the past sixth to ninth month versus ninth to twelfth month prior to the score date {Based on GPI2 grouping}

Predicts the likelihood of an individual to self-monitor an illness or health condition. They are likely to manage medication, look up health or nutritional information, post a question online or share personal health history, use an online application th

trend of cost per month of prescriptions related to generic drugs in the past three months versus third to sixth month prior to the score date

claims per month related to symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified: symptoms and signs involving the digestive system and abdomen in the past one year {based on CMS diagnosis code level-2}

Greenhouse vegetable and fresh herb farms

% HH Bank Card Accts 60+ Days Past Due

allowed cost per month for overall claims related to outpatient facilities in the past sixth to ninth month prior to the score date

Percent White Collar Employed

Net Migration 2010-2016

SNAP households, low access to store

binary value indicating the presence of behavioral health condition related to no dementia in the past one year

member reponsible cost per month of prescriptions related to non maintenance drugs in the past ninth to twelfth month prior to the score date

Retirement destination counties

trend of member responsibilty cost per month for prescriptions in the past three months versus third to sixth month prior to the score date

Natural population change 2010-2016

percentage of claims related to home health services procedure in the past one year {based on CCS codes}

member responsibility cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past sixth to ninth month prior to the score date

trend of number of distinct drugs per month at a GPI6 level in the past three months versus third to sixth month prior to the score date

unique authorization/admit count for post acute admits related to neoplasms (benign) in the past three months {Based on Major Clinical Condition}

Hispanic ethnicity, low access to store

unique authorization/admit count for discharge category related to no ref in the past three months

member responsibilty cost per month for prescriptions in the past one year

number of prescriptions per month in the past three months prior to score date

unique authorization/admit count for discharge category related to snf in the past three months

trend of count per month of prescriptions purchased at humana pharmacy in the past third to sixth month versus sixth to ninth month prior to the score date

Households, no car & low access to store

unique authorization/admit count for acute admits related to insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/defibrillator in the past three months {Based on CCS}

net paid cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past three months prior to score date

unique authorization/admit count for acute admits related to endocrine in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for admit category related to psychic in the past three months

High natural amentities

unique authorization/admit count for admit category related to bh acute in the past three months

Balance Consumer Finance Accts

unique authorization/admit count for acute admits related to congestive heart failure in the past three months {Based on Major Clinical Condition}

trend of the number of prescriptions per month in the past three months versus third to sixth month prior to the score date Clinical Care - Percentage of population under age 65 without health insurance

trend of claims per month related to congestive heart failure in the past third to sixth month versus sixth to ninth month prior to the score date {based on Major Clinical Condition}

member reponsible cost per month of prescriptions related to mail drugs in the past three months prior to score date

trend of copay cost per month for behavioral health claims related to urgent care in the past sixth to ninth month versus ninth to twelfth month prior to the score date in the past sixth to ninth month versus ninth to twelfth month prior to the score date unique authorization/admit count for admit category related to hospice in the past three months

unique authorization/admit count for acute admits related to diseases of blood and blood-forming organs in the past three months {Based on Major Clinical Condition}

WIC participants (% pop)

percentage of claims related to diagnostic ultrasound of heart (echocardiogram) procedure in the past one year {based on CCS codes}

unique authorization/admit count for discharge category related to hospice in the past three months

unique authorization/admit count for acute admits related to tonsillectomy and/or adenoidectomy in the past three months {Based on CCS}

Farmers' markets that report selling baked/prepared food products

member reponsible cost per month of prescriptions related to non maintenance drugs in the past one year

unique authorization/admit count for acute admits related to diseases of skin and subcutaneous tissue in the past three months {Based on Major Clinical Condition}

Vegetable farms

Household very low food security (%, three-year average), 2013-15

count per month of distinct prescriptions related to CALCIUM CHANNEL BLOCKERS drugs at the GPI6 level in the past one year {Based on Generic Product Identifier-2 grouping}

net paid cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past one year % HH Bank Card Accts - Severe Derogatory Accts

count per month of prescriptions related to CARDIOLOGY - HEART FAILURE drugs in the past one year {Based on Humana drug classification}

Member age {calculated using est bday, relative to score/index date}

trend of cost per month of prescriptions related to maintenance drugs in the past three months versus third to sixth month prior to the score date

count per month of member interactions via webstatement in the past one year

Seniors, low access to store

percentage of claims for physician evaluation and management related to outpatient in the past one year

Per capita Income in the past 12 months 2014-2018

Clinical Care - Percentage of adults under age 65 without health insurance

member reponsible cost per month of prescriptions related to generic drugs in the past three months prior to score date unique authorization/admit count for acute admits related to neonates in the past three months {Based on Major Clinical Condition}

Physical Environment - Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)

cost per month of prescriptions related to CEPHALOSPORINS drugs in the past one year {Based on Generic Product Identifier-2 grouping}

Recreation & fitness facilities

Mail Order Buver

count per month of distinct LOINC codes related to albumin in the past one year

**Adult Obesity Rate** 

trend of net paid cost per month of prescriptions related to maintenance drugs in the past sixth to ninth month versus ninth to twelfth month prior to the score date

claims per month for a revenue code related to specialty services in the past one year

Summer Food Service Program participants (% pop)

net paid cost per month for overall claims related to physician office in the past ninth to twelfth month prior to the score date Direct farm sales per capita

admitted days per month for non-behavioral health claims related to skilled nursing inpatient facilities in the past one year

trend of visits per month for rejected non-behavioral health claims related to outpatient facilities among rejected claims in the past three months versus third to sixth month prior to the score date among rejected claims in the past three months versus t unique authorization/admit count for post acute admits related to v-codes in the past three months {Based on Major Clinical Condition}

Total Part D Payment Amount

count per month of distinct prescriptions related to non over the counter drugs at the GPI6 level in the past one year

count per month of prescriptions related to non maintenance drugs in the past one year

member reponsible cost per month of prescriptions related to non behavioral health drugs in the past sixth to ninth month prior to the score date

Student Loan Index (0: Top Decile, 9: Bottom Decile)

High poverty counties

unique authorization/admit count for post acute admits related to digestive in the past three months {Based on Major Clinical Condition}

member reponsible cost per month of prescriptions related to non behavioral health drugs in the past one year

SNAP redemptions/SNAP-authorized stores

Berry farms

trend of coinsurance cost per month for rejected non-behavioral health claims related to skilled nursing inpatient facilities among rejected claims in the past third to sixth month versus sixth to ninth month prior to the score date among rejected claims

Health Behaviors - Percentage of adults age 20 and over reporting no leisure-time physical activity

count per month of prescriptions related to ANTICONVULSANTS drugs in the past sixth to ninth month prior to the score date {Based on Generic Product Identifier-2 grouping}

Census Percent Married

trend of allowed cost per month for non-behavioral health claims related to physician office in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month prior to the sco

unique authorization/admit count for acute admits related to respiratory in the past three months {Based on MCC}

claims per month for a revenue code related to ct scan in the past one year

Food hubs

copay cost per month for overall claims related to physician office in the past one year

unique authorization/admit count for acute admits related to digestive in the past three months {Based on MCC}

unique authorization/admit count for discharge category related to acute rehab in the past three months

Farmers' markets that report selling animal products

unique authorization/admit count for post acute admits related to other heart disease in the past three months {Based on MCC} member responsibility cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past third to sixth month prior to the score date

unique authorization/admit count for acute admits related to skin graft in the past three months {Based on CCS}

Number Agency 1st Mortgage Accts

trend of net paid cost per month for overall claims related to physician office in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month prior to the score date

unique authorization/admit count for acute admits related to arthroplasty other than hip or knee in the past three months {Based on CCS}

Mining-dependent counties

Agritourism receipts

days since last prescription in the past one year

Population, low access to store

unique authorization/admit count for post acute admits related to respiratory in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for acute admits related to infections in the past three months {Based on Major Clinical Condition}

cost per month of prescriptions related to PENICILLINS drugs in the past three months prior to score date {Based on Generic Product Identifier-2 grouping}

Poverty rate

Covid vaccination

Clinical Care - Percentage of children under age 19 without health insurance

trend of the count per month of prescriptions related to branded drugs in the past three months versus third to sixth month prior to the score date

trend of deductible cost per month for non-behavioral health claims related to outpatient facilities in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month prior to

Balance All Mortgage Type Accts New w/in 12 months

Low employment counties

Adult Diabetes Rate

Asian, low access to store

Deep poverty

Net international migration rate 2010-2016

Deep poverty for children

percentage of claims corresponding to behavioral health conditions related to nc dementia in the past one year

unique authorization/admit count for admit category related to non er in the past three months

Child food insecurity (% households, multiple-year average), 2003-11

member reponsible cost per month of prescriptions related to branded drugs in the past one year

WIC redemptions per capita

Health Behaviors - Motor vehicle crash deaths

unique authorization/admit count for acute admits related to coronary artery disease in the past three months {Based on Major Clinical Condition}

Students eligible for reduced-price lunch

Net Worth Per Adult

trend of allowed cost per month for overall claims in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month prior to the score date

cost per month of prescriptions related to CONTRACEPTIVES drugs in the past one year {Based on Humana drug classification}

MAPD behavioral segment - text categories

Code indicating the original reason for entry into Medicare

Total number of occupied housing units

days since last claim for non-behavioral health claims related to physician office in the past sixth to ninth month prior to the score date

member responsibility cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past ninth to twelfth month prior to the score date

Percent of Farms with direct sales

member reponsible cost per month of prescriptions related to generic drugs in the past one year

member responsibility cost per month for overall claims related to outpatient facilities in the past sixth to ninth month prior to the score date

unique authorization/admit count for post acute admits related to other circulatory in the past three months {Based on Major Clinical Condition}

count per month of prescriptions related to CALCIUM CHANNEL BLOCKERS: CALCIUM CHANNEL BLOCKERS drugs in the past one year {Based on Generic Product Identifier-4 grouping}

unique authorization/admit count for post acute admits related to cerebrovascular in the past three months {Based on Major Clinical Condition}

count per month of distinct LOINC codes in the past one year

National School Lunch Program participants (% pop)

count per month of prescriptions related to generic drugs in the past three months prior to score date

trend of member responsibility cost per month for out-of-network claims in the past three months versus third to sixth month prior to the score date

Low income & low access to store

binary value indicating the presence of behavioral health condition related to neuro cognition disorder: alzheimers in the past one year

unique authorization/admit count for post acute admits related to musculoskeletal and connective tissue in the past three months {Based on Major Clinical Condition}

Farmers' markets that report accepting SFMNP

Member geographic information - Humana Region

trend of the count per month of distinct prescriptions related to non mail drugs at the Generic Product Identifier-6 level in the past third to sixth month versus sixth to ninth month prior to the score date

Direct farm sales

net paid cost per month for behavioral health claims related to skilled nursing inpatient facilities in the past sixth to ninth month prior to the score date

trend of net paid cost per month for rejected non-behavioral health claims related to emergency room among rejected claims in the past third to sixth month versus sixth to ninth month prior to the score date among rejected claims in the past third to sixt Balance Auto Bank Loan Accts

trend of member responsibility cost per month for non-behavioral health claims related to outpatient facilities in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth mon member responsibilty cost per month for prescriptions in the past three months prior to score date count per month of prescriptions related to Tier 2 drugs in the past third to sixth month prior to the score date net paid cost per month of prescriptions related to non behavioral health drugs in the past one year

count per month of prescriptions related to maintenance drugs in the past ninth to twelfth month prior to the score date trend of net paid cost per month of prescriptions related to non behavioral health drugs in the past three months versus third to sixth month prior to the score date

Recreation counties

unique authorization/admit count for post acute admits related to signs and symptoms in the past three months {Based on MCC} trend of cost per month of prescriptions related to ANTIHYPERLIPIDEMICS drugs in the past three months versus third to sixth month prior to the score date {Based on Generic Product Identifier-2 grouping}

County typology economic types

Risk Adjustment Factor A Amount

trend of net paid cost per month for overall claims related to maternity inpatient facilities in the past sixth to ninth month versus ninth to twelfth month prior to the score date in the past sixth to ninth month versus ninth to twelfth month prior to th cost per month of prescriptions related to generic drugs in the past one year

claims per month related to diseases of the eye and adnexa: disorders of choroid and retina in the past one year {based on CMS diagnosis code level2}

unique authorization/admit count for acute admits related to malignant neoplasms in the past three months {Based on MCC} unique authorization/admit count for admit category related to post acute in the past three months

unique authorization/admit count for admit category related to facility in the past three months

days since last prescription in the past three months prior to score date

Population loss counties

trend of the count per month of prescriptions related to maintenance drugs in the past three months versus third to sixth month prior to the score date

unique authorization/admit count for post acute admits related to mental health conditions in the past three months {Based on Major Clinical Condition}

Mean length of stay for authorization category of acute in the past three months

Number Auto Finance Loan Accts

**RX Maintenance Meds** 

trend of net paid cost per month of prescriptions related to mail drugs in the past three months versus third to sixth month prior to the score date

unique authorization/admit count for admit category related to home in the past three months

member reponsible cost per month of prescriptions related to maintenance drugs in the past sixth to ninth month prior to the score date

Use Wearable Device to Manage Health - Index

trend of member responsibility cost per month for overall claims related to physician office in the past third to sixth month versus sixth to ninth month prior to the score date

Black, low access to store

Percent of persons 65 or older living alone

Farm to school program

unique authorization/admit count for acute admits related to injury and poisoning in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for acute admits related to hip replacement, total and partial in the past three months {Based on CCS}

days since last claim among rejected claims in the past one year

unique authorization/admit count for admit category related to transplant in the past three months

net paid cost per month for behavioral health claims related to outpatient facilities in the past one year

Farms with direct sales

cost per month of prescriptions related to generic drugs in the past sixth to ninth month prior to the score date

claims per month for a revenue code related to anesthesiology in the past one year

Convenience stores/1.000 pop

allowed cost per month for non-behavioral health claims in the past ninth to twelfth month prior to the score date trend of member reponsible cost per month of prescriptions related to mail drugs in the past third to sixth month versus sixth to ninth month prior to the score date

trend of visits per month for non-behavioral health claims related to outpatient facilities in the past sixth to ninth month versus ninth to twelfth month prior to the score date in the past sixth to ninth month versus ninth to twelfth month prior to the trend of the count per month of prescriptions related to non behavioral health drugs in the past third to sixth month versus sixth to ninth month prior to the score date

unique authorization/admit count for admit category related to acute in the past three months

count per month of prescriptions related to non behavioral health drugs in the past three months prior to score date

Expenditures per capita, fast food

unique authorization/admit count for discharge category related to left ama in the past three months

Balance Bank Card Accts - Severe Derogatory Accts

Poverty rate for children age 0-17

count per month of prescriptions related to Tier 1 drugs in the past three months prior to score date

unique authorization/admit count for acute admits related to other diagnostic procedures in the past three months {Based on CCS} Estimated Household Investable Assets Recoded

unique authorization/admit count for behavioral health acute admits related to mental health conditions in the past three months {Based on Major Clinical Condition}

count per month of prescriptions related to CALCIUM CHANNEL BLOCKERS drugs in the past one year {Based on Generic Product Identifier-2 grouping}

unique authorization/admit count for discharge category related to custodial in the past three months

Vegetable acres harvested/1,000 pop

Grocery stores/1,000 pop

trend of net paid cost per month for non-behavioral health claims in the past three months versus third to sixth month prior to the score date in the past three months versus third to sixth month prior to the score date

count per month of distinct prescriptions related to DERMATOLOGICALS drugs at the GPI6 level in the past ninth to twelfth month prior to the score date {Based on Generic Product Identifier-2 grouping}

CSA farms

Member gender

trend of cost per month of prescriptions related to PSYCHOTHERAPEUTIC AND NEUROLOGICAL AGENTS - MISC. drugs in the past third to sixth month versus sixth to ninth month prior to the score date {Based on Generic Product Identifier-2 grouping}

Preferred language for member

trend of the number of prescriptions per month in the past sixth to ninth month versus ninth to twelfth month prior to the score date

unique authorization/admit count for admit category related to Itac in the past three months

**Household Composition** 

unique authorization/admit count for acute admits related to other heart disease in the past three months {Based on Major Clinical Condition}

**RX Adherence - Supplement** 

unique authorization/admit count for acute admits related to mental health conditions in the past three months {Based on Major Clinical Condition}

Farmers' markets that report accepting SNAP

percentage of medical claims related to obesity in the past one year {Based on metabolic syndrome}

Medicare Part D Risk Adjustment Factor Amount

School Breakfast Program participants (% pop)

Social and Economic Factors - Residential segregation - black/white

Child & Adult Care (% pop)

unique authorization/admit count for admit category related to rehab in the past three months

proportion of days covered for prescriptions related to hyperlipidemia in the past one year

Fast-food restaurants/1,000 pop

Number Auto Bank Loan Accts New w/in 12 months

unique authorization/admit count for acute admits related to other hernia repair in the past three months {Based on CCS}

count per month of prescriptions related to Tier 2 drugs in the past one year

Census Percent White

trend of the count per month of distinct prescriptions related to non maintenance drugs at the Generic Product Identifier-6 level in the past sixth to ninth month versus ninth to twelfth month prior to the score date

Berry acres/1,000 pop

Farmers' markets that report accepting credit cards

Small slaughterhouse facilities

Expenditures per capita, restaurants

% HH 1st Mortgage Accts

unique authorization/admit count for admit category related to snf\_post\_hsp in the past three months

Farmers' markets that report accepting WIC Cash

Household food insecurity (%, three-year average), 2013-15

unique authorization/admit count for acute admits related to cerebrovascular in the past three months {Based on Major Clinical Condition}

RX Adherence - Maintenance

Farmers' markets

trend of cost per month of prescriptions related to non over the counter drugs in the past three months versus third to sixth month prior to the score date

count per month of claims related to diabetes without chronic complications in the past one year {Based on Charlson Comorbidity Index Categories}

unique authorization/admit count for acute admits related to head/neck/spine trauma, multiple fractures, and paralysis in the past three months {Based on Major Clinical Condition}

Census Percent Hispanic

copay cost per month for behavioral health claims related to physician office in the past sixth to ninth month prior to the score date

Social and Economic Factors - Ratio of household income at the 80th percentile to income at the 20th percentile

visits per month for rejected overall claims related to physician office among rejected claims in the past three months prior to score date

unique authorization/admit count for acute admits related to diabetes in the past three months {Based on Major Clinical Condition}

Number Non-Mortgage Loan Accts 60+ Days Past Due

unique authorization/admit count for admit category related to snf\_direct in the past three months

Balance Auto Finance Loan Accts New w/in 12 months

unique authorization/admit count for acute admits related to other procedures, hemic and lymphatic systems in the past three months {Based on CCS}

unique authorization/admit count for acute admits related to heart valve procedures in the past three months {Based on CCS}

Clinical Care - Ratio of population to mental health providers

unique authorization/admit count for discharge category related to home\_health in the past three months

count per month of distinct prescriptions related to GENITOURINARY AGENTS - MISCELLANEOUS drugs at the GPI6 level in the past third to sixth month prior to the score date {Based on Generic Product Identifier-2 grouping}

claims per month related to symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified: symptoms and signs involving the genitourinary system in the past one year {based on CMS diagnosis code level2}

unique authorization/admit count for acute admits related to other circulatory in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for acute admits related to nervous system in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for acute admits related to other or upper gi therapeutic procedures in the past three months {Based on CCS}

trend of coinsurance cost per month for non-behavioral health claims related to ambulance place of treatment in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month

Binary flag without applying all Diabetes HEDIS eligibility criteria indicating if evidence for HBA1C test is greater than or equal to ninein the past one year

percentage of claims corresponding to behavioral health conditions related to neuro cognition disorder: alzheimers in the past one year

SNAP participants (% pop)

percentage of claims related to other diagnostic procedures procedure in the past one year {based on CCS codes}

Greenhouse veg and fresh herb sq feet/1,000 pop

days since last prescription in the past sixth to ninth month prior to the score date

Orchard acres/1,000 pop

Persistent child poverty counties

unique authorization/admit count for post acute admits related to coronary artery disease in the past three months {Based on Major Clinical Condition}

Multiracial, low access to store

Census Geo-unit Quality Score

claims per month related to bone marrow biopsy procedure in the past one year {based on CCS codes}

unique authorization/admit count for acute admits related to coronary artery bypass graft (cabg) in the past three months {Based on CCS}

Median household income

trend of net paid cost per month of prescriptions related to maintenance drugs in the past third to sixth month versus sixth to ninth month prior to the score date

Health Outcomes - % Frequent mental distress

trend of admitted days per month for behavioral health claims related to skilled nursing inpatient facilities in the past third to sixth month versus sixth to ninth month prior to the score date in the past third to sixth month versus sixth to ninth month

trend of count per month of prescriptions purchased at cvs pharmacy in the past third to sixth month versus sixth to ninth month prior to the score date

Member zip code

unique authorization/admit count for post acute admits related to chronic kidney disease in the past three months {Based on Major Clinical Condition}

Hawaiian or Pacific Islander, low access to store

unique authorization/admit count for post acute admits related to nervous system in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for admit category related to post\_er in the past three months

Number Consumer Finance Accts New w/in 12 months

cost per month of prescriptions related to ULCER DRUGS/ANTISPASMODICS/ANTICHOLINERGICS drugs in the past three months prior to score date {Based on Generic Product Identifier-2 grouping}

Census Median Home Value

Average household size

net paid cost per month for prescriptions in the past sixth to ninth month prior to the score date

Percent of owner occupied housing units

Orchard farms

trend of visits per month for overall claims related to physician office in the past three months versus third to sixth month prior to the score date in the past three months versus third to sixth month prior to the score date

Farmers' markets that report accepting WIC

count per month of prescriptions related to BETA BLOCKERS drugs in the past three months prior to score date {Based on Generic Product Identifier-2 grouping}

unique authorization/admit count for post acute admits related to congestive heart failure in the past three months {Based on Major Clinical Condition}

Social and Economic Factors - Number of membership associations per 10K population

Farms with vegetables harvested for fresh market

unique authorization/admit count for acute admits related to other or rx procedures on respiratory system and mediastinum in the past three months {Based on CCS}

unique authorization/admit count for post acute admits related to infections in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for acute admits related to signs and symptoms in the past three months {Based on Major Clinical Condition}

days since last claim in the past three months prior to score date

unique authorization/admit count for discharge category related to other in the past three months

Mean length of stay for authorization category of behavioral health acute in the past three months

percentage of claims related to endocrine in the past one year {based on Major Clinical Condition}

unique authorization/admit count for post acute admits related to genito-urinary system in the past three months {Based on Major Clinical Condition}

The probability of the individual being less likely to use doctor/physician as a primary source for medical information

Farmers' markets that report selling other food products
unique authorization/admit count for post acute admits related to endocrine in the past three months {Based on Major Clinical Condition}

unique authorization/admit count for acute admits related to musculoskeletal and connective tissue in the past three months {Based on Major Clinical Condition}

Persistent poverty counties

White, low access to store

Mean length of stay for authorization category of post acute in the past three months

count per month of prescriptions related to ANALGESICS - ANTI-INFLAMMATORY drugs in the past one year {Based on Generic Product Identifier-2 grouping}

unique authorization/admit count for acute admits related to genito-urinary system in the past three months {Based on Major Clinical Condition}

trend of the count per month of distinct prescriptions related to generic drugs at the GPI6 level in the past third to sixth month versus sixth to ninth month prior to the score date

Low education counties

Code indicating a member's race {0 = Unknown, 1 = White, 2 = Black, 3 = Other, 4 = Asian, 5 = Hispanic, 6 = N. American Native}

Field Name	Description
CONS_HHCOMP	Indicator of the household composition based on family position and presence of children.
MABH_SEG	MAPD Behavioral Segmentation - A classification of members based on their engagement with the health and their willingness to engage with Humana
SEX_CD	Individual Sex
LANG_SPOKEN_CD	Preferred language spoken in the home

# CMS\_ORIG\_REAS\_ENTITLE\_CD Code indicating the original reason for entry into

Medicare

#### **Values**

- A = Married (husband and wife present) with children present.
- B = Married (husband & wife present) with no children present.
- C = Two persons, one male and one female marital status unknown with children present.
- D = Two persons, one male and one female marital status unknown with no children present.
- E = Male householder with one or more other persons of any gender with children present.
- F = Male householder with one or more persons of any gender with no children present.
- G = Female householder with one or more other persons of any gender with children present.
- H = Female householder with one or more other persons of any gender with no children present.
- I = One person (male householder) with children present.
- J = One person (male householder) with no children present.
- K = One person (female householder) with children present.
- L = One person (female householder) with no children present.
- U = Composition unknown
- H1 Healthy: Self-Engaged Optimists
- H2 Healthy: Auto-Pilot Participators
- H3 Healthy: Health Services Maximizers
- H4 Healthy: Healthy Self-Sustainers
- H5 Healthy: Simplicity-Seeking Followers
- H6 Healthy: Skeptical Control-Seekers A
- H7 Healthy: Skeptical Control-Seekers B
- H8 Healthy: Overwhelmed and Reluctant Reactors
- C1 Chronic:Support-Seeking Participators
- C2 Chronic:Self-Engaged Optimists
- C3 Chronic: Health Services Maximizers
- C4 Chronic: Auto-Pilot Participators
- C5 Chronic:Simplicity-Seeking Followers
- C6 Chronic:Skeptical Control-Seekers
- C7 Chronic: Overwhelmed and Reluctant Reactors
- F Female
- M Male
- VIE Vietnamese
- SPA Spanish
- ENG English
- CHI Chinese
- **CRE CREE**
- OTH Other

0 - Old Age Survivors Insurance (OASI)

0 - - - ( -

1 - Disable

2 - End Stage Renal Disease (ESRD)

3 - Both null - null