# Table 1A. Baseline Characteristics by ABG Group

Table 1A: ABG cohorts

| **Variable** | **No ABG**  N = 328,0441 | **ABG\_NoHypercapnia**  N = 129,4291 | **ABG\_Hypercapnia**  N = 57,8131 |
| --- | --- | --- | --- |
| Age (years) | 58.1 ± 18.1; 0.0/328,044.0 missing (0.0%) | 60.8 ± 17.1; 0.0/129,429.0 missing (0.0%) | 62.1 ± 16.4; 0.0/57,813.0 missing (0.0%) |
| Current BMI kg/m2 | 32.3 ± 8.7; 184,223.0/328,044.0 missing (56.2%) | 28.6 ± 6.9; 75,826.0/129,429.0 missing (58.6%) | 29.8 ± 7.9; 33,496.0/57,813.0 missing (57.9%) |
| sex\_label |  |  |  |
| Female | 169,023 (52%) | 57,767 (45%) | 27,116 (47%) |
| Male | 159,021 (48%) | 71,662 (55%) | 30,697 (53%) |
| race\_ethnicity\_label |  |  |  |
| White | 200,033 (61%) | 81,357 (63%) | 39,784 (69%) |
| Black or African American | 62,418 (19%) | 19,197 (15%) | 8,082 (14%) |
| Hispanic | 23,548 (7.2%) | 7,464 (5.8%) | 2,757 (4.8%) |
| Asian | 4,880 (1.5%) | 2,739 (2.1%) | 789 (1.4%) |
| American Indian | 1,971 (0.6%) | 1,768 (1.4%) | 316 (0.5%) |
| Pacific Islander | 460 (0.1%) | 162 (0.1%) | 56 (<0.1%) |
| Unknown | 34,734 (11%) | 16,742 (13%) | 6,029 (10%) |
| location\_label |  |  |  |
| South | 138,843 (42%) | 70,729 (55%) | 32,694 (57%) |
| Northeast | 93,209 (28%) | 23,262 (18%) | 12,975 (22%) |
| Midwest | 22,924 (7.0%) | 10,703 (8.3%) | 4,844 (8.4%) |
| West | 73,068 (22%) | 24,735 (19%) | 7,300 (13%) |
| osa\_label | 60,653 (18%) | 17,709 (14%) | 11,965 (21%) |
| asthma\_label | 48,456 (15%) | 13,049 (10%) | 8,268 (14%) |
| copd\_label | 60,214 (18%) | 21,195 (16%) | 18,846 (33%) |
| chf\_label | 59,770 (18%) | 25,469 (20%) | 16,219 (28%) |
| nmd\_label | 11,891 (3.6%) | 5,861 (4.5%) | 2,487 (4.3%) |
| phtn\_label | 23,854 (7.3%) | 10,513 (8.1%) | 7,347 (13%) |
| ckd\_label | 54,528 (17%) | 24,849 (19%) | 11,769 (20%) |
| diabetes\_label | 93,007 (28%) | 37,426 (29%) | 18,521 (32%) |
| encounter\_type\_label |  |  |  |
| Emergency | 142,713 (44%) | 19,196 (15%) | 9,818 (17%) |
| Inpatient | 185,331 (56%) | 110,233 (85%) | 47,995 (83%) |
| VBG PCO2 | 45.5 ± 10.5; 233,430.0/328,044.0 missing (71.2%) | 42.0 ± 11.2; 91,782.0/129,429.0 missing (70.9%) | 57.4 ± 18.4; 40,411.0/57,813.0 missing (69.9%) |
| Arterial PCO2 | NA ± NA; 328,044.0/328,044.0 missing (100.0%) | 35.5 ± 6.1; 0.0/129,429.0 missing (0.0%) | 58.5 ± 20.4; 0.0/57,813.0 missing (0.0%) |
| 1Mean ± SD; N Missing/No. obs. missing (% Missing); n (%) | | | |

# Table 1B. Baseline Characteristics by VBG Group

Table 1B: VBG cohorts

| **Variable** | **No VBG**  N = 365,6231 | **VBG\_NoHypercapnia**  N = 105,6461 | **VBG\_Hypercapnia**  N = 44,0171 |
| --- | --- | --- | --- |
| Age (years) | 59.4 ± 17.8; 0.0/365,623.0 missing (0.0%) | 58.1 ± 17.8; 0.0/105,646.0 missing (0.0%) | 61.0 ± 16.7; 0.0/44,017.0 missing (0.0%) |
| Current BMI kg/m2 | 31.8 ± 8.5; 192,892.0/365,623.0 missing (52.8%) | 28.7 ± 7.2; 69,615.0/105,646.0 missing (65.9%) | 29.3 ± 7.9; 31,038.0/44,017.0 missing (70.5%) |
| sex\_label |  |  |  |
| Female | 184,619 (50%) | 48,931 (46%) | 20,356 (46%) |
| Male | 181,004 (50%) | 56,715 (54%) | 23,661 (54%) |
| race\_ethnicity\_label |  |  |  |
| White | 241,114 (66%) | 55,100 (52%) | 24,960 (57%) |
| Black or African American | 61,814 (17%) | 19,199 (18%) | 8,684 (20%) |
| Hispanic | 22,951 (6.3%) | 8,354 (7.9%) | 2,464 (5.6%) |
| Asian | 5,439 (1.5%) | 2,293 (2.2%) | 676 (1.5%) |
| American Indian | 2,128 (0.6%) | 1,683 (1.6%) | 244 (0.6%) |
| Pacific Islander | 543 (0.1%) | 110 (0.1%) | 25 (<0.1%) |
| Unknown | 31,634 (8.7%) | 18,907 (18%) | 6,964 (16%) |
| location\_label |  |  |  |
| South | 196,774 (54%) | 30,426 (29%) | 15,066 (34%) |
| Northeast | 65,537 (18%) | 44,405 (42%) | 19,504 (44%) |
| Midwest | 24,891 (6.8%) | 9,178 (8.7%) | 4,402 (10%) |
| West | 78,421 (21%) | 21,637 (20%) | 5,045 (11%) |
| osa\_label | 65,748 (18%) | 15,634 (15%) | 8,945 (20%) |
| asthma\_label | 49,810 (14%) | 13,419 (13%) | 6,544 (15%) |
| copd\_label | 70,950 (19%) | 16,459 (16%) | 12,846 (29%) |
| chf\_label | 68,964 (19%) | 20,573 (19%) | 11,921 (27%) |
| nmd\_label | 14,796 (4.0%) | 3,754 (3.6%) | 1,689 (3.8%) |
| phtn\_label | 27,731 (7.6%) | 8,534 (8.1%) | 5,449 (12%) |
| ckd\_label | 61,091 (17%) | 21,290 (20%) | 8,765 (20%) |
| diabetes\_label | 101,173 (28%) | 33,665 (32%) | 14,116 (32%) |
| encounter\_type\_label |  |  |  |
| Emergency | 124,405 (34%) | 34,711 (33%) | 12,611 (29%) |
| Inpatient | 241,218 (66%) | 70,935 (67%) | 31,406 (71%) |
| VBG PCO2 | NA ± NA; 365,623.0/365,623.0 missing (100.0%) | 40.1 ± 6.6; 0.0/105,646.0 missing (0.0%) | 60.2 ± 12.6; 0.0/44,017.0 missing (0.0%) |
| Arterial PCO2 | 42.4 ± 15.5; 233,430.0/365,623.0 missing (63.8%) | 38.6 ± 15.4; 68,334.0/105,646.0 missing (64.7%) | 52.7 ± 19.6; 26,280.0/44,017.0 missing (59.7%) |
| 1Mean ± SD; N Missing/No. obs. missing (% Missing); n (%) | | | |