## APdata\_analysisMW

## Maggie Westerland

## 2023-04-16

## load('final\_df.Rdata')

```
final_df <- final_df %>%
  mutate(pre_htn = as.factor(pre_htn)) %>%
  mutate(post_htn = as.factor(post_htn)) %>%
  mutate(bmi_return = as.factor(bmi_return)) %>%
  mutate(gest_age_wks = as.numeric(gest_age_wks)) %>%
  mutate(ob_gravidity = as.character(ob_gravidity)) %>%
  mutate(ob_gravidity = as.factor(ob_gravidity)) %>%
  mutate(ob_parity = as.character(ob_parity)) %>%
  mutate(ob_parity = as.factor(ob_parity)) %>%
  mutate(ob_multiple_births = as.character(ob_multiple_births)) %>%
  mutate(ob_multiple_births = as.factor(ob_multiple_births)) %>%
  filter(delivery_method != 'Other') %>%
  mutate(delivery_method = as.character(delivery_method)) %>%
  mutate(delivery_method = as.factor(delivery_method)) %>%
  mutate(ob_gravidity = factor(ob_gravidity, levels = c(1,
                                                         4.
                                                         6,
                                                        8,
                                                         10,
                                                         11,
                                                         12,
                                                         13,
                                                         14,
                                                         15,
                                                         16,
                                                         17,
                                                         18))) %>%
  mutate(ob_parity = factor(ob_parity, levels = c(1,
                                                   3,
                                                   4,
                                                  5,
                                                  6,
                                                  7,
```

```
10,
                                               11,
                                               12)))
## Warning: There was 1 warning in 'mutate()'.
## i In argument: 'gest_age_wks = as.numeric(gest_age_wks)'.
## Caused by warning:
## ! NAs introduced by coercion
final_df %>%
 select(mom_age_at_del,
        mom_race,
        mom_ethnicity,
        mom_marital_status,
        employment_status,
        preeclampsia,
        pregest_dm,
        gestational_dm,
        placental_abruption,
        maternal_dvt,
        gest_age_wks,
        delivery_method,
        ob_gravidity,
        ob_parity,
        ob_multiple_births,
        baby_count,
        mean_pre_bmi,
        mean_post_bmi,
        bmi_return
 ) %>%
 tbl_summary(
   by = bmi_return,
   missing_text = 'Missing'
 ) %>%
 add_p() %>%
 modify_header(label = "**Variable**") %>%
 bold_labels()
## 11553 observations missing 'bmi_return' have been removed. To include these observations, use 'forca
## There was an error in 'add_p()/add_difference()' for variable 'ob_gravidity', p-value omitted:
## Error in stats::fisher.test(structure(c(3L, 2L, 3L, 1L, 3L, 1L, 1L, 6L, : FEXACT error 7(location).
     (pastp=21.3799, ipn_0:=ipoin[itp=305]=4074, stp[ipn_0]=25.8415).
## Increase workspace or consider using 'simulate.p.value=TRUE'
## Error in stats::fisher.test(structure(c(1L, 1L, 1L, 1L, 2L, 1L, 1L, 6L, : FEXACT error 7(location).
    (pastp=52.3735, ipn_0:=ipoin[itp=343]=7775, stp[ipn_0]=46.8034).
## Increase workspace or consider using 'simulate.p.value=TRUE'
## Table printed with 'knitr::kable()', not {gt}. Learn why at
```

9,

## https://www.danieldsjoberg.com/gtsummary/articles/rmarkdown.html
## To suppress this message, include 'message = FALSE' in code chunk header.

Variable	no, N = 3,059	yes, N = 4,299	p-value
mom_age_at_del	$29.0\ (25.0,\ 33.0)$	$30.0\ (27.0,\ 33.0)$	< 0.001
mom_race			< 0.001
Black or African American	762~(25%)	654~(15%)	
Other	305 (10%)	369~(8.6%)	
White or Caucasian	1,975~(65%)	3,262 (76%)	
Missing	17	14	
${f mom\_ethnicity}$			0.049
Hispanic	179 (5.9%)	$206 \ (4.8\%)$	
NH	2,875 (94%)	4,084 (95%)	
Other	0 (0%)	0 (0%)	
Missing	5	9	
${f mom\_marital\_status}$			< 0.001
Divorced	113 (3.7%)	129 (3.0%)	
Married	1,798 (59%)	3,129 (73%)	
Other	82 (2.7%)	$64 \ (1.5\%)$	
Single	1,065 (35%)	976 (23%)	
Missing	1	1	
employment_status			< 0.001
Full Time	1,661 (54%)	2,530 (59%)	
Not Employed	850 (28%)	968 (23%)	
Other	$132\ (4.3\%)$	206 (4.8%)	
Part Time	409 (13%)	583 (14%)	
Missing	7	12	
preeclampsia	$258 \ (8.4\%)$	365~(8.5%)	>0.9
$pregest\_dm$	5 (0.2%)	3 (< 0.1%)	0.3
${f gestational\_dm}$	57 (1.9%)	52 (1.2%)	0.022
placental_abruption	29~(0.9%)	$41 \ (1.0\%)$	> 0.9
${ m maternal\_dvt}$	0 (0%)	0 (0%)	> 0.9
${ m gest\_age\_wks}$	$39.00 \ (37.57, \ 39.71)$	39.14 (38.29, 40.00)	< 0.001
Missing	85	114	
${f delivery\_method}$			0.2
C-Section	885~(29%)	1,220~(28%)	
Operative Vaginal	$138 \ (4.5\%)$	233 (5.4%)	
Vaginal	2,036 (67%)	2,846~(66%)	
${ m ob\_gravidity}$			
1	$1,163 \ (38\%)$	1,853 (43%)	
2	761~(25%)	1,075~(25%)	
3	477~(16%)	681~(16%)	
4	$289 \ (9.5\%)$	$336 \ (7.8\%)$	
5	166 (5.4%)	$173 \ (4.0\%)$	
6	84 (2.7%)	84 (2.0%)	
7	55 (1.8%)	39~(0.9%)	
8	29~(0.9%)	$18 \; (0.4\%)$	
9	17(0.6%)	17 (0.4%)	
10	6 (0.2%)	4 (<0.1%)	
11	4 (0.1%)	7 (0.2%)	
12	2 (< 0.1%)	2 (<0.1%)	
13	3 (< 0.1%)	0 (0%)	

Variable	no, N = 3,059	yes, N = 4,299	p-value
14	0 (0%)	0 (0%)	
15	0 (0%)	1 (<0.1%)	
16	0 (0%)	0 (0%)	
17	0 (0%)	1 (<0.1%)	
18	1 (<0.1%)	0 (0%)	
Missing	$\stackrel{\cdot}{2}$	8	
ob_parity			
1	1,523 (53%)	2,315 (58%)	
2	766 (27%)	1,019 (25%)	
3	322 (11%)	445 (11%)	
4	160 (5.6%)	150 (3.7%)	
Ď	59 (2.0%)	46 (1.1%)	
6	28 (1.0%)	31 (0.8%)	
7	10 (0.3%)	8 (0.2%)	
3	6(0.2%)	3 (<0.1%)	
9	3 (0.1%)	4 (<0.1%)	
10	2 (<0.1%)	0 (0%)	
11	0 (0%)	1 (<0.1%)	
12	1 (<0.1%)	1 (<0.1%)	
Missing	179	276	
ob_multiple_births			0.8
0	2,719 (96%)	3,769 (96%)	
1	111 (3.9%)	140 (3.6%)	
2	3 (0.1%)	3 (<0.1%)	
3	0 (0%)	1 (<0.1%)	
Missing	226	386	
baby_count			0.8
1	3,002 (98%)	4,220 (98%)	
2	55 (1.8%)	78 (1.8%)	
3	2 (<0.1%)	1 (<0.1%)	
mean_pre_bmi	31(26, 36)	28 (25, 32)	< 0.001
${ m mean\_post\_bmi}$	32(27, 38)	$25\ (22,\ 29)$	< 0.001

```
unweighted_mod <- glm(</pre>
  post_htn ~
    bmi_return +
    mom_age_at_del +
    mom_race +
    mom_ethnicity +
    mom_marital_status +
    employment_status +
    preeclampsia +
    pregest_dm +
    gestational_dm +
    placental_abruption +
    #maternal_dvt #+ # not enough obs
    gest_age_wks +
    delivery_method +
    ob_gravidity +
    ob_parity +
    ob_multiple_births +
```

```
baby_count +
   mean_pre_bmi
    #mean post bmi not converging
 data = final df,
 family = binomial(link = "logit"))
summary(unweighted_mod)
##
## Call:
## glm(formula = post_htn ~ bmi_return + mom_age_at_del + mom_race +
      mom_ethnicity + mom_marital_status + employment_status +
##
      preeclampsia + pregest_dm + gestational_dm + placental_abruption +
##
      gest_age_wks + delivery_method + ob_gravidity + ob_parity +
##
      ob_multiple_births + baby_count + mean_pre_bmi, family = binomial(link = "logit"),
##
      data = final df)
##
## Deviance Residuals:
##
                     Median
                                  3Q
      Min
                10
                                          Max
                     0.3827
## -2.7369
            0.2859
                              0.5225
                                       5.3024
##
## Coefficients:
                                     Estimate Std. Error z value Pr(>|z|)
##
## (Intercept)
                                    1.780e+00 7.096e-01 2.508
                                                                   0.0121 *
                                    3.566e-01 8.091e-02 4.408 1.05e-05 ***
## bmi_returnyes
## mom_age_at_del
                                   -8.290e-02 8.588e-03 -9.653 < 2e-16 ***
## mom raceOther
                                    4.351e-01 1.715e-01 2.537
                                                                   0.0112 *
                                    6.551e-01 1.135e-01 5.774 7.76e-09 ***
## mom_raceWhite or Caucasian
## mom ethnicityNH
                                    1.605e-01 1.906e-01 0.842
                                                                   0.3997
## mom_marital_statusMarried
                                    3.944e-01 1.989e-01 1.983
                                                                   0.0474 *
## mom_marital_statusOther
                                    3.325e-01 3.407e-01
                                                           0.976
                                                                   0.3290
                                    6.896e-02 2.080e-01 0.332
                                                                   0.7402
## mom_marital_statusSingle
## employment_statusNot Employed
                                   -1.888e-01 9.519e-02 -1.984
                                                                   0.0473 *
## employment_statusOther
                                   -3.648e-01 1.709e-01 -2.134
                                                                   0.0328 *
## employment_statusPart Time
                                    3.743e-02 1.263e-01
                                                           0.296
                                                                   0.7670
                                   -1.595e+00 1.087e-01 -14.676 < 2e-16 ***
## preeclampsiaYes
                                                          0.525
                                                                   0.5999
## pregest_dmYes
                                    5.801e-01 1.106e+00
## gestational_dmYes
                                   -1.419e-01 2.737e-01 -0.518
                                                                   0.6043
                                    4.112e-01 3.980e-01 1.033
                                                                   0.3016
## placental_abruptionYes
                                    7.023e-02 1.196e-02 5.873 4.27e-09 ***
## gest_age_wks
## delivery_methodOperative Vaginal 2.043e-01 2.164e-01 0.944
                                                                   0.3451
## delivery_methodVaginal
                                    1.733e-01 8.611e-02 2.012
                                                                   0.0442 *
## ob_gravidity2
                                   -8.435e-02 1.297e-01 -0.650
                                                                   0.5155
                                   -8.390e-02 1.569e-01 -0.535
## ob gravidity3
                                                                   0.5928
## ob_gravidity4
                                   -2.616e-01 1.828e-01 -1.431
                                                                   0.1525
## ob gravidity5
                                   -3.566e-01 2.177e-01 -1.638
                                                                   0.1014
## ob_gravidity6
                                   -4.242e-01 2.682e-01 -1.582
                                                                   0.1137
## ob_gravidity7
                                   -7.151e-01 3.314e-01 -2.158
                                                                   0.0309 *
## ob_gravidity8
                                   4.185e-01 5.022e-01 0.833
                                                                   0.4047
## ob_gravidity9
                                   -4.389e-01 4.951e-01 -0.886
                                                                   0.3754
                                   -1.582e-01 8.690e-01 -0.182
                                                                   0.8556
## ob_gravidity10
## ob_gravidity11
                                   -1.175e+00 8.398e-01 -1.399
                                                                   0.1619
```

```
0.9889
## ob gravidity15
                                    1.224e+01 8.827e+02
                                                          0.014
## ob_gravidity17
                                    1.260e+01 8.827e+02 0.014
                                                                  0.9886
## ob_parity2
                                   -8.917e-02 1.267e-01 -0.704
                                                                  0.4815
## ob_parity3
                                   -6.279e-02 1.674e-01 -0.375
                                                                  0.7075
                                   -4.223e-02 2.191e-01 -0.193
## ob parity4
                                                                  0.8472
                                    1.481e-01 3.250e-01 0.456
## ob_parity5
                                                                  0.6487
                                    2.320e-01 4.360e-01 0.532
## ob_parity6
                                                                  0.5946
## ob_parity7
                                   -7.547e-01 5.995e-01 -1.259
                                                                  0.2080
## ob_parity8
                                    3.223e-02 9.067e-01 0.036
                                                                  0.9716
                                    8.672e-01 1.303e+00 0.665
## ob_parity9
                                                                  0.5057
## ob_parity10
                                   1.163e+01 5.697e+02 0.020
                                                                  0.9837
## ob_parity11
                                    1.464e+01 8.827e+02 0.017
                                                                  0.9868
                                   -2.521e+01 1.005e+03 -0.025
                                                                  0.9800
## ob_parity12
## ob_multiple_births1
                                   -3.850e-01 2.326e-01 -1.655
                                                                  0.0978 .
                                   -6.724e-01 1.252e+00 -0.537
## ob_multiple_births2
                                                                  0.5913
## ob_multiple_births3
                                   1.142e+01 8.827e+02
                                                          0.013
                                                                  0.9897
                                   7.552e-01 3.138e-01 2.406
                                                                  0.0161 *
## baby_count
## mean_pre_bmi
                                   -5.335e-02 5.164e-03 -10.332 < 2e-16 ***
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
      Null deviance: 5211.1 on 6336 degrees of freedom
## Residual deviance: 4373.0 on 6288 degrees of freedom
     (12574 observations deleted due to missingness)
## AIC: 4471
##
## Number of Fisher Scoring iterations: 13
unweighted_mod2 <- glm(
 post_htn ~
   bmi return +
   mom_age_at_del +
   mom race +
   mom_ethnicity +
   mom_marital_status +
   employment_status +
   preeclampsia +
   pregest_dm +
   gestational_dm +
   placental_abruption +
    #maternal_dvt #+ # not enough obs
   gest_age_wks +
   delivery_method +
   ob_gravidity +
   ob_parity +
   ob_multiple_births +
   baby_count +
   mean_pre_bmi
    #mean_post_bmi not converging
```

## ob\_gravidity12

## ob\_gravidity13

0.024

0.9809

0.8394

1.148e+01 4.808e+02

3.445e-01 1.700e+00 0.203

```
data = unweighted_mod$model,
 family = binomial(link = "logit"))
step_unweight2 <- step(unweighted_mod2)</pre>
## Start: AIC=4471.02
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
      mom_marital_status + employment_status + preeclampsia + pregest_dm +
      gestational_dm + placental_abruption + gest_age_wks + delivery_method +
##
      ob_gravidity + ob_parity + ob_multiple_births + baby_count +
##
      mean_pre_bmi
##
##
                        Df Deviance
                                       AIC
                             4385.5 4455.5
## - ob_gravidity
                        14
## - ob_parity
                        11
                             4380.1 4456.1
## - ob multiple births
                       3 4376.0 4468.0
## - gestational_dm
                        1 4373.3 4469.3
## - pregest_dm
                             4373.3 4469.3
## - mom_ethnicity
                         1
                             4373.7 4469.7
## - placental_abruption 1 4374.2 4470.2
                             4373.0 4471.0
## <none>
                         2 4377.2 4471.2
## - delivery_method
## - employment_status
                         3 4381.0 4473.0
## - baby_count
                        1 4378.9 4474.9
## - mom_marital_status
                           4384.3 4476.3
                         3
                            4392.4 4488.4
## - bmi_return
                         1
                         2 4406.4 4500.4
## - mom race
                        1 4405.9 4501.9
## - gest_age_wks
## - mom_age_at_del
                        1 4467.1 4563.1
## - mean_pre_bmi
                         1 4481.6 4577.6
                             4575.0 4671.0
## - preeclampsia
                         1
##
## Step: AIC=4455.54
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
      mom_marital_status + employment_status + preeclampsia + pregest_dm +
##
      gestational_dm + placental_abruption + gest_age_wks + delivery_method +
##
      ob_parity + ob_multiple_births + baby_count + mean_pre_bmi
##
##
                        Df Deviance
                                       AIC
                             4398.6 4446.6
## - ob_parity
                        11
## - ob_multiple_births
                             4388.4 4452.4
## - pregest_dm
                         1
                             4385.9 4453.9
                             4385.9 4453.9
## - gestational_dm
                         1
                             4386.4 4454.4
## - mom_ethnicity
                         1
## - placental_abruption 1
                             4386.9 4454.9
## <none>
                             4385.5 4455.5
## - delivery_method
                             4390.4 4456.4
                            4393.1 4457.1
## - employment_status
                         3
## - baby_count
                           4391.3 4459.3
                         1
## - mom marital status
                         3 4397.4 4461.4
## - bmi return
                         1 4405.3 4473.3
                         2 4420.5 4486.5
## - mom_race
                        1 4418.9 4486.9
## - gest_age_wks
```

```
## - mom_age_at_del
                       1 4490.9 4558.9
                           4495.2 4563.2
## - mean_pre_bmi
                        1
## - preeclampsia
                        1 4588.0 4656.0
##
## Step: AIC=4446.59
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
      mom_marital_status + employment_status + preeclampsia + pregest_dm +
      gestational_dm + placental_abruption + gest_age_wks + delivery_method +
##
##
      ob_multiple_births + baby_count + mean_pre_bmi
##
##
                       Df Deviance
                                      AIC
                        3 4402.2 4444.2
## - ob_multiple_births
## - gestational_dm
                        1
                            4398.9 4444.9
                           4399.0 4445.0
## - pregest_dm
## - mom_ethnicity
                        1 4399.7 4445.7
## - placental_abruption 1
                           4399.8 4445.8
                            4398.6 4446.6
## <none>
## - delivery_method
                        2 4402.7 4446.7
                        3 4408.5 4450.5
## - employment_status
                        1 4404.8 4450.8
## - baby count
## - mom_marital_status 3 4412.1 4454.1
## - bmi return
                       1 4419.0 4465.0
                       1 4432.3 4478.3
## - gest_age_wks
                        2
                           4442.4 4486.4
## - mom race
                       1 4510.5 4556.5
## - mean_pre_bmi
## - mom_age_at_del
                       1 4543.5 4589.5
## - preeclampsia
                           4594.8 4640.8
                        1
##
## Step: AIC=4444.23
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
##
      mom_marital_status + employment_status + preeclampsia + pregest_dm +
##
      gestational_dm + placental_abruption + gest_age_wks + delivery_method +
##
      baby_count + mean_pre_bmi
##
##
                       Df Deviance
                                      AIC
                        1 4402.5 4442.5
## - gestational_dm
## - pregest dm
                           4402.6 4442.6
## - placental_abruption 1
                            4403.2 4443.2
## - mom_ethnicity
                            4403.4 4443.4
                            4402.2 4444.2
## <none>
## - delivery_method
                        2 4406.5 4444.5
## - baby count
                        1 4405.3 4445.3
## - employment_status
                        3
                           4412.6 4448.6
## - mom_marital_status
                        3 4415.6 4451.6
                        1 4422.7 4462.7
## - bmi_return
                        1 4436.8 4476.8
## - gest_age_wks
                        2 4446.9 4484.9
## - mom_race
                       1 4513.8 4553.8
## - mean_pre_bmi
## - mom_age_at_del
                       1 4550.6 4590.6
## - preeclampsia
                            4598.6 4638.6
##
## Step: AIC=4442.48
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
      mom_marital_status + employment_status + preeclampsia + pregest_dm +
```

```
##
      placental_abruption + gest_age_wks + delivery_method + baby_count +
##
      mean_pre_bmi
##
##
                        Df Deviance
                                       ATC
## - pregest_dm
                            4402.9 4440.9
                             4403.5 4441.5
## - placental abruption 1
## - mom ethnicity
                             4403.6 4441.6
                             4402.5 4442.5
## <none>
## - delivery_method
                             4406.7 4442.7
                            4405.5 4443.5
## - baby_count
                         1
## - employment_status
                            4412.9 4446.9
                            4416.0 4450.0
## - mom_marital_status
                         3
                            4423.1 4461.1
## - bmi_return
                         1
                            4437.0 4475.0
## - gest_age_wks
                         1
## - mom_race
                         2 4447.0 4483.0
## - mean_pre_bmi
                         1
                            4514.6 4552.6
                         1 4551.6 4589.6
## - mom_age_at_del
## - preeclampsia
                             4598.7 4636.7
##
## Step: AIC=4440.89
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
      mom_marital_status + employment_status + preeclampsia + placental_abruption +
##
      gest_age_wks + delivery_method + baby_count + mean_pre_bmi
##
##
                        Df Deviance
                                       ATC
## - placental_abruption 1
                             4403.9 4439.9
## - mom_ethnicity
                             4404.0 4440.0
                             4402.9 4440.9
## <none>
## - delivery_method
                            4407.1 4441.1
## - baby_count
                            4405.9 4441.9
                         1
## - employment_status
                         3
                            4413.3 4445.3
## - mom_marital_status
                         3
                            4416.5 4448.5
## - bmi_return
                            4423.4 4459.4
                            4437.4 4473.4
## - gest_age_wks
                         1
## - mom race
                            4447.2 4481.2
                         1
                            4515.0 4551.0
## - mean_pre_bmi
## - mom age at del
                         1 4552.2 4588.2
## - preeclampsia
                         1
                             4598.8 4634.8
##
## Step: AIC=4439.89
## post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_ethnicity +
##
      mom_marital_status + employment_status + preeclampsia + gest_age_wks +
      delivery_method + baby_count + mean_pre_bmi
##
##
                       Df Deviance
                        1 4405.0 4439.0
## - mom_ethnicity
## - delivery_method
                            4407.9 4439.9
## <none>
                            4403.9 4439.9
## - baby_count
                        1
                            4406.8 4440.8
## - employment_status
                        3
                            4414.3 4444.3
## - mom_marital_status 3
                            4417.3 4447.3
                        1 4424.5 4458.5
## - bmi_return
## - gest_age_wks
                        1 4437.7 4471.7
                        2 4448.1 4480.1
## - mom race
```

```
4517.2 4551.2
## - mean_pre_bmi
                       1
                           4552.9 4586.9
## - mom_age_at_del
                       1
                           4599.9 4633.9
## - preeclampsia
                       1
##
## Step: AIC=4439.05
  post_htn ~ bmi_return + mom_age_at_del + mom_race + mom_marital_status +
      employment_status + preeclampsia + gest_age_wks + delivery_method +
##
      baby_count + mean_pre_bmi
##
##
                      Df Deviance
                                     AIC
## <none>
                           4405.0 4439.0
                           4409.1 4439.1
## - delivery_method
## - baby_count
                           4408.0 4440.0
                       1
## - employment_status
                       3
                           4415.5 4443.5
                       3
                           4419.3 4447.3
## - mom_marital_status
## - bmi_return
                       1
                           4425.7 4457.7
                       1 4439.2 4471.2
## - gest_age_wks
## - mom race
                       2 4448.4 4478.4
                       1 4520.6 4552.6
## - mean_pre_bmi
## - mom age at del
                       1
                           4553.0 4585.0
## - preeclampsia
                           4600.8 4632.8
summary(step_unweight2)
##
## Call:
  glm(formula = post_htn ~ bmi_return + mom_age_at_del + mom_race +
##
      mom_marital_status + employment_status + preeclampsia + gest_age_wks +
      delivery_method + baby_count + mean_pre_bmi, family = binomial(link = "logit"),
##
##
      data = unweighted_mod$model)
##
## Deviance Residuals:
##
               10
                  Median
                                 3Q
      Min
                                        Max
  -2.7474
            0.2913
                    0.3884
                             0.5226
                                      5.4027
##
## Coefficients:
##
                                   Estimate Std. Error z value Pr(>|z|)
                                   2.3786585 0.6538074 3.638 0.000275 ***
## (Intercept)
                                   0.3645681 0.0802354 4.544 5.53e-06 ***
## bmi_returnyes
## mom_age_at_del
                                  -0.0928983 0.0077380 -12.005 < 2e-16 ***
## mom_raceOther
                                   0.4242112  0.1530555  2.772  0.005578 **
## mom_raceWhite or Caucasian
                                   0.4380126 0.1944887
                                                        2.252 0.024314 *
## mom_marital_statusMarried
                                  ## mom_marital_statusOther
## mom_marital_statusSingle
                                   0.0768532 0.2049372 0.375 0.707654
                                  -0.2236321 0.0931632 -2.400 0.016376 *
## employment_statusNot Employed
## employment_statusOther
                                  -0.4183186   0.1688414   -2.478   0.013228 *
                                  0.0005067 0.1254013 0.004 0.996776
## employment_statusPart Time
## preeclampsiaYes
                                  -1.5479568 0.1068661 -14.485 < 2e-16 ***
## gest_age_wks
                                   ## delivery_methodOperative Vaginal 0.2776892 0.2153825
                                                        1.289 0.197299
## delivery_methodVaginal
                                   0.1535456  0.0846024  1.815  0.069538 .
## baby_count
                                   0.4102919 0.2445956 1.677 0.093458 .
                                  -0.0545407 0.0051104 -10.673 < 2e-16 ***
## mean_pre_bmi
```

```
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
## Null deviance: 5211.1 on 6336 degrees of freedom
## Residual deviance: 4405.0 on 6320 degrees of freedom
## AIC: 4439
##
## Number of Fisher Scoring iterations: 5

tbl_regression(step_unweight2, exponentiate = T)
```

## Table printed with 'knitr::kable()', not {gt}. Learn why at
## https://www.danieldsjoberg.com/gtsummary/articles/rmarkdown.html
## To suppress this message, include 'message = FALSE' in code chunk header.

Characteristic	$\mathbf{OR}$	95% CI	p-value
bmi_return			
no			
yes	1.44	1.23, 1.69	< 0.001
$mom\_age\_at\_del$	0.91	0.90,  0.93	< 0.001
mom_race			
Black or African American		_	
Other	1.53	1.14,  2.07	0.006
White or Caucasian	2.05	1.66, 2.54	< 0.001
$mom\_marital\_status$			
Divorced		_	
Married	1.55	1.05,  2.25	0.024
Other	1.37	0.72, 2.70	0.3
Single	1.08	0.72, 1.60	0.7
employment_status			
Full Time		_	
Not Employed	0.80	0.67,  0.96	0.016
Other	0.66	0.48,  0.92	0.013
Part Time	1.00	0.79, 1.28	> 0.9
preeclampsia			
No			
Yes	0.21	0.17,  0.26	< 0.001
$gest\_age\_wks$	1.07	1.05, 1.10	< 0.001
delivery_method			
C-Section		_	
Operative Vaginal	1.32	0.88,  2.05	0.2
Vaginal	1.17	0.99, 1.38	0.070
baby_count	1.51	0.95,  2.48	0.093
mean_pre_bmi	0.95	0.94,  0.96	< 0.001

data dictionary:

patient\_num: integer unique to each patient

dx\_code: character ICD-10 code for the diagnosis of hypertension if applicable, I10

htn\_dx\_date: date shifted date of patient diagnosis of hypertension if applicable, shifted by  $\pm$  10 days pre\_htn: factor yes if patient was diagnosed w/ hypertension before 12 months post-delivery, no if not post\_htn: factor yes if patient was diagnosed w/ hypertension between 13-72 months post-delivery, no if not

mom\_admit\_dttm\_shifted: date date of the mother's delivery admission

mom\_disch\_dttm\_shifted: date date of the mother's delivery discharge

mom\_los: integer mom's length of stay in days for the delivery encounter

mom\_age\_at\_del: date mom's age at delivery in years

mom\_marital\_status: factor mom's current marital status: Divorced, Married, Other, Single

mom\_race: factor mom's current race: Black or African American, Other, White or Caucasian

mom\_ethnicity: factor mom's current ethnicity: Hispanic, NH (non-hispanic), Other

mom\_wt\_oz: numeric most recent mother weight up to delivery

mom bmi: numeric most recent mother BMI up to delivery

**preeclampsia**: factor indicates presence of a preeclampsia diagnosis on the delivery encounter

pregest\_dm: factor indicates presence of a pregestational diabetes diagnosis on the delivery encounter

gestational\_dm: factor indicates presence of a gestational diabetes diagnosis on the delivery encounter

**placental\_abruption**: factor indicates presence of a placental abruption diagnosis on the delivery encounter

maternal\_dvt: factor indicates presence of a maternal deep vein thrombosis diagnosis on the delivery encounter

baby patient num: integer Masked MRN, the i2b2 patient number

baby yob shifted: date Baby's year of birth

baby\_dob\_shifted: date Baby's date of birth

baby\_dod\_shifted: date Baby's date of death

baby\_admit\_dttm\_shifted: date Date of the baby's birth admission

baby\_disch\_dttm\_shifted: date Date of the baby's birth discharge

baby\_birth\_ht\_in: numeric Baby's birth height in inches

baby\_birth\_wt\_oz: numeric Baby's birth weight in ounces

baby birth wt gms: numeric Baby's birth weight in grams

gest\_age\_wks: numeric Baby's gestational age in weeks and days divided 7

**delivery\_method**: factor Name of the delivery method used for the birth: C-Section, Operative Vaginal, Vaginal, Other (not included in analyses)

baby\_sex: factor baby's current sex, male or female

baby\_race: factor baby's current race: Black or African American, Other, White or Caucasian

baby ethnicity: factor baby's current ethnicity: Hispanic, NH (non-hispanic), Other

**ob\_gravidity**: factor Number of pregnancies documented on the first OB visit up to 90 days after the delivery

**ob\_parity**: factor Number of viable offspring documented on the first OB visit up to 90 days after the delivery

**ob\_multiple\_births**: factor Number of multiple births documented on the first OB visit up to 90 days after the delivery

mom\_ht\_cm: numeric mom's height in centimeters

baby\_count: integer number of babies birthed in most recent birth

diff\_htn: numeric number of days between diagnosis of hypertension and baby DOB

measure date shifted: date date of mom's BMI measurement

highest\_diastolic: numeric mom's diastolic component of highest blood pressure up to delivery

highest\_systolic: date mom's systolic component of highest blood pressure up to delivery

post\_bmi\_date: date date of post-delivery BMI measurement

pre\_bmi\_date: date date of pre-delivery BMI measurement

mean\_pre\_bmi: numeric averaged BMI measured pre-delivery

mean\_post\_bmi: numeric averaged BMI measured post-delivery

birth date shifted: date mom's birth date

employment\_status: factor mom's current employment status: Full Time, Part Time, Not Employed,
Other

**bmi\_return**: factor yes if mom returned to pre-delivery BMI, no if post-delivery BMI was at least 1 point higher than pre-delivery BMI