Model draft

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model 1

```
mod1 <- lmer(c_weight~as.factor(fuel_bin)+w_age+bmi+as.factor(gender)+as.factor(residence)+ as.factor(w
```

```
c(summary(mod1)$coefficient[2,1:2], confint(mod1, method="Wald")[4,1:2],nobs(mod1),"birthweight",
    paste0(round(summary(mod1)$coefficient[2,1:2][1],2)," (",
    round(confint(mod1, method="Wald")[4,1:2][1],2),", ",
    round(confint(mod1, method="Wald")[4,1:2][2],2),")"))
```

```
##                 Estimate               Std. Error                    2.5 %
##       "22.9431895860758"       "39.7648796496601"      "-54.9945423768277"
##                   97.5 %
##       "100.880921548979"                   "2960"            "birthweight"
##
## "22.94 (-54.99, 100.88)"
```

with anemic

```
mod_ane <- lmer(c_weight~as.factor(fuel_bin)+w_age+bmi+as.factor(gender)+as.factor(residence)+ as.factor
```

```
    paste0(round(summary(mod_ane)$coefficient[2,1:2][1],2)," (",
    round(confint(mod_ane, method="Wald")[4,1:2][1],2),", ",
    round(confint(mod_ane, method="Wald")[4,1:2][2],2),")")
```

```
## [1] "32.38 (-46.84, 111.59)"
```

using only documented weights

```
doc_weight <- filter(newdata, document == 1)
mod_doc <- lmer(c_weight~as.factor(fuel_bin)+w_age+bmi+as.factor(gender)+as.factor(residence)+
        as.factor(wealth)+as.factor(education)+as.factor(marital_s)+(1|region),na.action=na.omit, data =
```

```
    paste0(round(summary(mod_doc)$coefficient[2,1:2][1],2)," (",
    round(confint(mod_doc, method="Wald")[4,1:2][1],2),", ",
    round(confint(mod_doc, method="Wald")[4,1:2][2],2),")")
```

```
## [1] "67.58 (-19.62, 154.77)"
```

```
##anemia
mod_doc_a <- lmer(c_weight~as.factor(fuel_bin)+w_age+bmi+as.factor(gender)+as.factor(residence)+as.facto


    paste0(round(summary(mod_doc_a)$coefficient[2,1:2][1],2)," (",
    round(confint(mod_doc_a, method="Wald")[4,1:2][1],2),", ",
    round(confint(mod_doc_a, method="Wald")[4,1:2][2],2),")")
```

```
## [1] "78.47 (-9.76, 166.71)"
```

##GLM

```
modglm <- glmer(bin_weight~as.factor(fuel_bin)+w_age+bmi+as.factor(gender)+as.factor(residence)+
        as.factor(wealth)+as.factor(education)+as.factor(marital_s)+(1|region),na.action=na.omit, data =
    control = glmerControl(optimizer = "bobyqa",nAGQ=9))


    paste0(round(exp(summary(modglm)$coefficient[2,1:2][1]),2)," (",
    round(exp(confint(modglm, method="Wald")[4,1:2][1]),2),", ",
    round(exp(confint(modglm, method="Wald")[4,1:2][2]),2),")")
```

```
## [1] "0.68 (0.97, 1.01)"
```

Not significant

```
##documented
dglm <- glmer(bin_weight~as.factor(fuel_bin)+w_age+bmi+as.factor(gender)+as.factor(residence)+
        as.factor(wealth)+as.factor(education)+as.factor(marital_s)+(1|region),na.action=na.omit, data =
    control = glmerControl(optimizer = "bobyqa",nAGQ=9))

##bmi categorised, take out smoke, married be binary, model per residence status, poorest vs richest


    paste0(round(exp(summary(dglm)$coefficient[2,1:2][1]),2)," (",
    round(exp(confint(dglm, method="Wald")[4,1:2][1]),2),", ",
    round(exp(confint(dglm, method="Wald")[4,1:2][2]),2),")")
```

```
## [1] "0.55 (0.96, 1.01)"
```

Not significant